

AD-A072 573

NAVAL POSTGRADUATE SCHOOL MONTEREY CA

F/G 5/1

AN EVALUATION OF THE EFFECTIVENESS OF THE NAVY'S HUMAN RESOURCE--ETC(U)

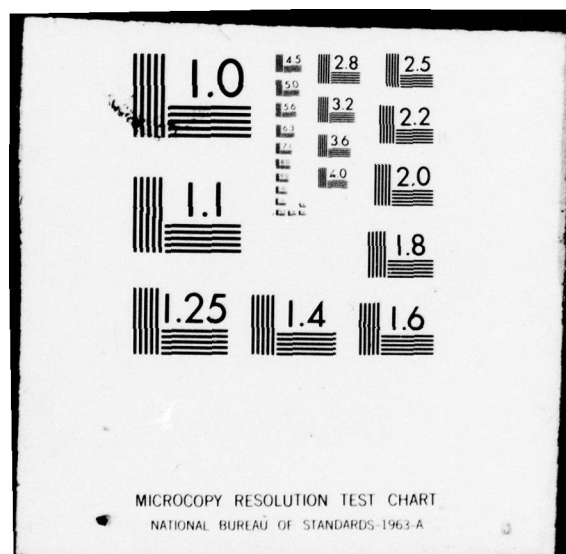
JUN 79 J R ALMONY, J D REECE

UNCLASSIFIED

NL

1 of 3
AD
A072573





LEVEL *11*

Q

NAVAL POSTGRADUATE SCHOOL
Monterey, California

A072573



THESIS

AN EVALUATION OF THE EFFECTIVENESS OF THE
NAVY'S HUMAN RESOURCE MANAGEMENT SURVEY AS A
NAVY ENLISTED RETENTION MANAGEMENT TOOL.

by

Joseph R. Almony

and

Jerrald D. Reece

June 1979

Thesis Advisor:

R.A. McGonigal

Approved for public release, distribution
unlimited

DDC FILE COPY

79 08 10 011

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERED
An Evaluation of the Effectiveness of the Navy's Human Resource Management Survey as a Navy Enlisted Retention Management Tool		Master's Thesis June 1979
7. AUTHOR(s)		6. PERFORMING ORG. REPORT NUMBER
Joseph R. Almony and Jerrald D. Reece		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
Naval Postgraduate School Monterey, California 93940		
11. CONTROLLING OFFICE NAME AND ADDRESS		12. REPORT DATE
Naval Postgraduate School Monterey, California 93940		June 1979
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES
Naval Postgraduate School Monterey, California 93940		249
		15. SECURITY CLASS. (of this report)
		Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
Approved for public release, distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
Employee Job Turnover, Employee Job Retention, Navy Personnel, Personnel Retention, Military Personnel Retention, Personnel Job Turnover, Personnel Management, Manpower Management.		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
Unit "retention Profiles" were developed using Navy Human Resource Management Survey responses for both high and low retention units. Although the "profiles" were found to be identical for both high and low retention units, comparative analysis of survey responses was found of value in assisting unit Commanding Officers in developing retention management strategies.		

DD FORM 1473
1 JAN 73
(Page 1)EDITION OF 1 NOV 68 IS OBSOLETE
N 010 11 601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

79 08 10 10 11

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE/When Data Entered

(Block 20 continued)

The data utilized consisted of 28,913 respondents of the Navy Human Resource Management Survey during the second quarter of fiscal year 1978. The individual's stated career intent was regressed on the survey dimensions, indices, and questions to further understand the dynamics of the retention decision. Unit "retention profiles" were developed as a result of stepwise discriminant analysis on the survey questions for both high and low retention units.

A detailed bibliography of employee job turnover is included as an aid to future researchers.

Accession For	
NTIS GRA&I	<input checked="checked" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist.	Avail and/or special
A	

Approved for Public Release, Distribution Unlimited

AN EVALUATION OF THE EFFECTIVENESS OF THE NAVY'S HUMAN RESOURCE MANAGEMENT SURVEY
AS A NAVY ENLISTED RETENTION MANAGEMENT TOOL

by

Joseph R. Almony
Lieutenant, United States Navy
B.A., Columbia University, 1970

Jerrald D. Reece
Lieutenant, United States Navy
B.S., George Washington University, 1972

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
June 1979

Authors

Joseph R. Almony
Jerrald D. Reece

Approved by:

Richard C. P. Gonzales
Thesis Advisor

Reuben T. Harris

Second Reader

[Signature]
Chairman, Administrative Science Department

[Signature]
Dean of Information and Policy Sciences

ABSTRACT

Unit "retention profiles" were developed using Navy Human Resource Management Survey responses for both high and low retention units. Although the "profiles" were found to be identical for both high and low retention units, comparative analysis of Survey responses was found of value in assisting unit Commanding Officers in developing retention management strategies.

The data utilized consisted of 28,913 respondents of the Navy Human Resource Management Survey during the second quarter of fiscal year 1978. The individual's stated career intent was regressed on the survey dimensions, indices, and questions to further understand the dynamics of the retention decision. Unit "retention profiles" were developed as a result of stepwise discriminant analysis on the survey questions for both high and low retention units.

A detailed bibliography of employee job turnover is included as an aid to future researchers.

TABLE OF CONTENTS

ABSTRACT	4
LIST OF FIGURES	8
LIST OF TABLES	9
I. INTRODUCTION.....	11
A. THESIS OVERVIEW.....	16
II. REVIEW OF LITERATURE.....	19
A. INDIVIDUAL DEMOGRAPHIC AND PERSONAL FACTORS..	20
1. Age.....	21
2. Tenure.....	21
3. Sex.....	22
4. Family Responsibilities.....	22
5. Education.....	23
6. Weighted Application Blanks (WAB).....	24
7. Other Personal Variables.....	24
8. Summary of Individual Demographic and Personal Factors.....	25
B. OVERALL JOB SATISFACTION AND TURNOVER.....	27
C. ORGANIZATIONAL AND WORK ENVIRONMENTAL FACTORS.....	28
1. Pay and Promotion.....	28
2. Organizational Size.....	29
3. Supervision.....	29
4. Peer Group Relations.....	30
5. Other Variables.....	31
6. Summary.....	32
D. JOB CONTENT FACTORS.....	32
E. EXTERNAL ENVIRONMENT.....	33
F. OCCUPATIONAL GROUPINGS.....	35
G. ORGANIZATIONAL COMMITMENT, INVOLVEMENT, AND JOB ATTACHMENT.....	36

H.	EXPECTATIONS.....	37
I.	PERFORMANCE.....	37
J.	BEHAVIOR INTENTIONS.....	38
K.	SUMMARY OF THE LITERATURE REVIEW.....	38
III.	METHODOLOGY.....	45
A.	THE SURVEY OF ORGANIZATIONS.....	45
B.	THE NAVY'S HUMAN RESOURCE MANAGEMENT SURVEY..	47
1.	Survey Design.....	48
2.	The Sample.....	49
3.	Description of Methodology.....	55
IV.	RESULTS.....	57
A.	REGRESSION ANALYSIS.....	57
B.	SUMMARY OF REGRESSION ANALYSIS.....	68
V.	DISCRIMINANT ANALYSIS.....	69
A.	ANALYSIS RESULTS.....	70
1.	Variables Entering the Discriminant Analysis.....	70
2.	Prediction Results.....	75
3.	Retention Group Profiles.....	77
B.	TESTING OF THE THESIS HYPOTHESIS.....	79
1.	High Retention Unit Analysis.....	81
2.	High Retention Unit Profile.....	89
3.	Low Retention Unit Analysis.....	92
4.	Low Retention Unit Profile.....	98
VI.	DISCUSSION.....	101
A.	A TYPOLOGY OF STATED INTENTION TO REENLIST IN THE NAVY.....	106
VII.	CONCLUSION.....	115
Appendix A:	DESCRIPTION OF DIMENSIONS AND INDICIES.....	123
Appendix B:	THE HUMAN RESOURCE MANAGEMENT SURVEY (SEA)..	128
Appendix C:	REGRESSION RESULTS OF INTENT ON INDICIES...	140
Appendix D:	ABBREVIATED FACTOR ANALYSIS VARIANCE SUMMARY.....	141
Appendix E:	ABBREVIATED FACTOR ANALYSIS MATRIX USING PRINCIPLE FACTOR, NO ITERATIONS.....	142

Appendix F: ABBREVIATED VARIMAX ROTATED FACTOR MATRIX, 88 QUESTIONS LIMITED TO FIVE FACTORS.	144
Appendix G: ABBREVIATED VARIMAX ROTATED FACTOR MATRIX ON EXISTING SURVEY DIMENSIONS.	147
Appendix H: SUMMARY OF REGRESSION RESULTS OF INTENT ON THE HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS	154
Appendix I: HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS ENTERING THE DISCRIMINANT ANALYSIS BY STATED CAREER INTENT	157
Appendix J: MEANS AND STANDARD DEVIATIONS FOR THOSE SURVEY QUESTIONS IN THE DISCRIMINANT ANALYSIS BY STATED INTENT TO REENLIST	160
Appendix K: HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS OF HIGH RETENTION UNITS ENTERING THE DISCRIMINANT ANALYSIS BY STATED CAREER INTENT	165
Appendix L: MEANS AND STANDARD DEVIATIONS FOR THOSE SURVEY QUESTIONS IN THE DISCRIMINANT ANALYSIS FOR HIGH RETENTION UNITS BY STATED INTENT TO REENLIST	167
Appendix M: HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS ENTERING THE DISCRIMINANT ANALYSIS BY STATED CAREER INTENT FOR LOW RETENTION UNITS.	171
Appendix N: MEANS AND STANDARD DEVIATION FOR THOSE SURVEY QUESTIONS IN THE DISCRIMINANT ANALYSIS BY STATED INTENT TO REENLIST FOR LOW RETENTION UNITS	173
BIBLIOGRAPHY	177
INITIAL DISTRIBUTION LIST.	248

LIST OF FIGURES

I.	Summary of Four Reviews of the Turnover Literature.....	40
II.	Classification of Stated Intent to Reenlist.....	109
III.	A Model of Individual Intent to Remain in an Organization.....	118

LIST OF TABLES

I.	Sample Demographic Breakdown.....	51
II.	Regression Results of Intent on Dimensions.....	58
III.	Regression Results of Intent on Indices.....	59
IV.	Regression Results of Intent on Questions.....	65
V.	Questions Entering Discriminant Analysis by Stated Career Intent.....	72
VI.	Means and Standard Deviations for Top Five Survey Questions in the Discriminant Analysis by Stated Intent to Reenlist.....	74
VII.	Discriminant Analysis Prediction Results.....	76
VIII.	Profiles of Reenlistment Intention Groups.....	78
IX.	Questions Entering Discriminant Analysis by Stated Career Intent of High Retention Units.....	82
X.	Means and Standard Deviations for Top Six Survey Questions in the Discriminant Analysis by Stated Intent to Reenlist among High Retention Units.....	86
XI.	Discriminant Analysis Prediction Results of High Retention Units.....	88
XII.	Profiles of Reenlistment Intention Groups in High Retention Units.....	90
XIII.	Questions Entering Discriminant Analysis by Stated Career Intent of Low Retention Units.....	93

XIV.	Means and Standard Deviations for Top Four Survey Questions in the Discriminant Analysis by Stated Intent to Reenlist Among Low Retention Units.....	95
XV.	Discriminant Analysis Prediction Results of Low Retention Units.....	97
XVI.	Profiles of Reenlistment Intention Groups in Low Retention Units.....	99
XVII.	Example: U.S.S. Barnacle.....	111

I. INTRODUCTION

In an address to the Navywide Retention Conference in August, 1978, the Chief of Naval Operations, Adm. Thomas Hayward, highlighted the issues and problems of Navy enlisted personnel retention. He pointed out that current retention rates were unsatisfactory and held very serious portents for the future. Adm. Hayward considered the most serious problem in Navy enlisted retention to be with second term petty officer reenlistment. The reenlistment rate for that group had been only 69% overall and was viewed as a serious situation (Sinaiko, 1978).

More recently, Adm. Robert Baldwin, Chief of Naval Personnel, has stated that retention of two-tour enlisted personnel is at its lowest level since the end of the draft. The rate had dipped, as of March 1979, to 47.3% overall. Adm. Baldwin also noted that "retention of personnel in some of the technical seagoing ratings (whose skills are in high demand in the civilian sector) is only 25% or less.¹

To put this matter in perspective, the Navy has, since 1975, gone from 20 ratings to over 63 ratings which are not meeting reenlistment goals. With regard to second term reenlistments, the situation is especially critical. In that group, 66 ratings are experiencing problems (Sinaiko, 1978).

The Department of Defense has been criticized by

- - - - -

1 Navy Times, March 19, 1979, p.34.

Congress for being ineffective in attrition management (Lockman, 1977). Radm. Joseph M. Metcalf (Pers 10X), presenting an Executive Review of manpower and personnel problems at the 1978 Navywide Retention Conference, highlighted a recent review by the House Armed Services Committee in its deliberations on the FY 79 Military Authorization Bill. The Committee cited the Navy on several accounts, i.e., recruiting shortfalls, high desertion rates, losses of career people, shortfalls of petty officers, and discipline problems. It directed the Secretary of the Navy "to report the Navy's manpower situation in general and to outline problems and detailed solutions to them" (Sinaiko, 1978).

Speaking before the House Military Personnel Subcommittee, Adm. Baldwin, along with Edward Hidalgo, Assistant Navy Secretary for Manpower and Reserve Affairs and Logistics, cited the Navy's efforts to "stem the tide", but admitted that attrition was up and recruiting was down - as was Officer retention and career reenlistments. On the brighter side, however, first-term reenlistments had increased to 40.3% - a high for recent years.¹

To date, considerable research effort has been focused on identifying relevant factors related to military personnel retention and turnover. Many of these research studies, as shall be seen, have concentrated on identifying the demographic and personal characteristics which appear to be related to, and directly influence, the retention decision. Unfortunately, research findings have been of little help in themselves in directly increasing the retention rates among active duty personnel - especially

- - - - -
1 Navy Times, March 19, 1979, p.34.

among those individuals whose background characteristics indicate relatively low probabilities of retention but whose abilities and skills are of high importance to the military (LaRocco, et al., 1977).

Many of the research studies show that personnel retention and attrition outcomes in the Navy are generally determined by multiple factors. Both pre-service characteristics (demography and social background) and in-service experiences (service history, satisfaction, and performance) were found to contribute significantly to the formulation of the retention decision. Pre-service status and attitudes, as reflected in length of enlistment contract, minority status, aptitude scores, amount of schooling, and school adjustment (expulsions) were differentiated among those personnel who attrite and those who remain in the Navy. Further, in-service variables such as technical schools completed, amount of sea duty, job satisfaction, performance record, marital status, and medical history also were discriminated with respect to retention (LaRocco, et al., 1976).

As noted by Lockman (1977), the retention decision is affected by the aggregate effects of societal, organizational, and individual factors. The social perspective that military service is a job (and maybe also an adventure), but a job nonetheless, and no longer a calling for citizen soldiers, has been cited as a major reason for the personnel retention problems facing the military today.

Organizational factors affecting attrition point to defective management policies and unit practices. Outmoded, uneconomical, monolithic policies (such as the granting of Basic Allowance for Quarters to only married personnel), often buttressed by law and traditions, and variable,

situational influences in men's units (such as unplanned operational schedule changes), combine to produce a major effect in the retention decision (Lockman, 1977).

Individual factors affecting attrition revolve about personal expectations and individual perceptions of both the work environment and the job itself.

Given the above perspective, it might be suggested that attrition in the military, which appears "inevitable", is also a reflection of the same kinds of adult socialization processes that take place in the civilian workplace. Thus young people should be expected to try to "find themselves" in the world of work. This is as true in military institutions as it is in the civilian sector. While attrition in the military is costly, it should also be recognized that attrition serves a valuable "correcting" function- "errors" are reduced when inadequate or unsuitable people are eliminated from the organization. Furthermore, attrition provides a screening function that cannot be effectively carried out prior to the individual's entry into the organization.

Assuming that we cannot (and perhaps should not) totally eliminate attrition in military organizations, it is logical to assert that these processes can be better managed to minimize organizational and personal costs and maximize benefits to all parties (Goodstadt and Glickman, 1975; LaRocco, et al., 1976). As the pool of qualified enlistment prospects shrinks, the need to develop an effective and efficient personnel retention management program grows in an accelerating fashion.

A prerequisite to the development of an effective personnel retention management program, however, requires the answering of several questions: Why do employees stay?

What are their values for working and for living? What are their ages, sexes, marital status, and so on? What are the right and wrong reasons for employees staying in their jobs? How dissatisfied is dissatisfied? (Flowers and Hughs, 1973).

The first step in developing a method to improve personnel retention management is to create or obtain accurate and usable information about the personnel who are to be managed. It is important that this information possess a measurable degree of accuracy and content validity - as it will form the basis upon which retention management decisions will be based.

The purpose of this thesis is to provide a method for unit Commanding Officers to improve unit retention management through effective use of the Human Resource Management Survey. The thesis is based on the following assumptions:

1. The Human Resource Management Survey is a valid instrument for measuring organizational factors, as noted in independently conducted validity studies.

2. An individual's stated intention to reenlist, above all other variables, is the strongest predictor of future turnover behavior. The literature review shows that one's stated intent to reenlist accounts for the greatest amount of variance in personnel turnover (Mobley, et al., 1977a).

The primary hypothesis to be tested in this study is whether or not the Navy Human Resource Management Survey can provide information which can be effectively utilized in planning personnel retention management strategies. Specifically, it is hypothesized that units having high levels of personnel retention will display a "retention profile" - as defined by mean scores on key questions in the

Human Resource Management Survey - that is significantly different from units having low retention levels. Further, that these "retention profiles" can be differentiated by effective use of the Human Resource Management Survey.

It is important to note that the Human Resource Management Survey contains data which are aggregated at the unit level and cannot be applied to examine individual behavior. Additionally, the data are gathered at a single point in time and, since changes in command are relatively frequent, the data may not be relevant for prediction (Goodstadt and Glickman, 1975). Accordingly, no attempt will be made in this study to predict future command retention rates based on survey responses. Instead, the primary focus of this thesis will be to evaluate the ability of the Human Resource Management Survey to provide valid, descriptive information which can assist unit commanders in developing effective personnel retention management strategies.

A. THESIS OVERVIEW

This thesis begins with a general review of available civilian and military studies concerned with personnel retention and job turnover. The literature review provides a summary of the current knowledge in the field of personnel retention and job turnover-both in the military and civilian environments. Continual reference will be made to these studies throughout the remainder of the thesis.

Following the literature review, the following methodological areas will be discussed:

1 Resource Management Surveyive overview of the Human

2. A description of the sample utilized in the thesis.
3. A description of the method of analysis used in this study.

Next, a regression analysis of the Human Resource Management Survey database will be performed and the analysis results presented. The regression analysis was performed to compare its results with the results of other research findings discussed in the literature review. It is anticipated that the results of the regression analysis performed on the survey database, when compared with previously published research results, will provide an initial assessment of the Human Resource Management Survey's utility in generating useful information for future Navy enlisted personnel management decisions.

The fourth section of the thesis will analyze the ability of the Human Resource Management Survey to differentiate between units having high and low retention rates. The hypothesis being tested in this section will be whether or not units, having either high or low retention rates, develop "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other. To test the hypothesis, discriminant analyses of the Human Resource Management Survey responses of various fleet units was performed. It was anticipated that the discriminant analyses of the survey responses would identify differences between the high and low retention units. Further, it was hoped that these differences would produce "retention profiles" which would be significantly different between high and low retention rate units. If successfully developed from the survey data, the "retention profiles" would be useful to unit commanders in assisting them in the development of effective retention management strategies and

decisions.

As appropriate, suggestions for practical utilization of Human Resource Management Survey data and implications for future research will conclude this thesis.

A consolidated bibliography of the turnover literature, including bibliographies provided by Porter and Steers (1973); Price (1977); Mobley, et al., (1977); Hand, et al., (1977); and the present authors, has been included to assist future researchers studying either military or civilian personnel retention.

II. REVIEW OF LITERATURE

The literature review conducted in this section will note the conclusions of Porter and Steers (1973); Price (1977); Mobley, et al., (1977a); and Hand, et al., (1977), provide a summarization of recent research not included in those reviews, and offer the present authors' conclusions.¹

The research summary will be divided into the following sections: 1) individual demographic and personal variables;

- - - - -

1 The last major review of turnover literature written prior to 1973 was that of Porter and Steers (1973). More recently, sociologist J. L. Price (1977) has published a significant book seeking to codify the turnover literature from a variety of disciplines, e.g. economics, sociology, and psychology. The Price book contains a number of references generally not included in the psychological and management turnover literatures cited in the United States. However, the Price codification does not deal with post-1974 research and is incomplete in its coverage of the psychological and management literature on employee turnover. Forrest, et al., (1977) also recently presented a partial review of the turnover literature. However, this review, which dealt with the broader spectrum of organizational participation behaviors, included no post-1973 research and had a conceptual rather than empirical emphasis (Mobley, et al., 1977a). Mobley, Griffeth, Hand, and Megilino (1977a) have conducted a post-1974 literature review on the turnover issue.

2) overall satisfaction; 3) organizational and work environment factors; 4) job content factors; 5) external environment factors; and 6) recently developed constructs.

A. INDIVIDUAL DEMOGRAPHIC AND PERSONAL FACTORS

This category includes such background variables as age, tenure, sex, family responsibilities, education, personality, other personal considerations, and, as listed in the Mobley, et al., (1977a) review, weighted application blanks.

- - - - -
(cont.) While updating the previous major literature reviews, Mobley, et al., (1977a) have focused their study specifically on employee turnover as an individual choice behavior. The interactions at unit, organizational, or other aggregate levels and their relationships toward turnover are viewed as having "little value in understanding individual turnover decisions." Further, the review does not deal with the issues of absenteeism nor that of terminations which are organization initiated.

Hand, Griffeth, and Mobley (1977), under the Navy All-Volunteer Force Manpower Research and Development Program of the Office of Naval Research, have produced a review of literature specifically directed toward military enlistment, reenlistment and withdrawal research. This review, designed to critically review and summarize existing attrition research, also includes analysis of original choice, first term attrition, and reenlistment. Studies that assessed behavioral intention, other forms of withdrawal and studies unrelated to withdrawal but of related interest were also included (Hand, et al., 1977).

1. Age

Porter and Steers (1973) and Price (1977) agreed that a well established negative relationship existed between increased age and turnover. Mobley, et al., (1977a) provides support for this conclusion but notes that the amount of variance being explained was, however, rather low. Mobley, et al., (1977a) noted that age was likely to covary with other variables, e.g. tenure, and standing alone, made little contribution to the understanding of the psychology of the turnover process. This latter statement is borne out when reviewing the findings presented by Hand, et al., (1977) concerning the effect of age as an independent variable. Age, when related to attrition, was found to have a positive relationship (Plag, et al., 1970) on the one hand and a non-linear relationship (Lockman, 1975) on the other.

Hand, et al., (1977) found the relationship between age and reenlistment to be no clearer than that between age and attrition noted above. Studies reviewed were contradictory and showed that age at enlistment was negatively related to reenlistment rate (Enns, 1975), that age had little effect on reenlistment (Haber, et al., 1974), and that age was a significant predictor in a regression equation that accounted for 35 percent of the variance in relation to reenlistment (La Rocco, et al., 1975).

2. Tenure

Porter and Steers (1973), Price (1977), and Mobley, et al., (1977a) agree that strong support exists in the literature for the conclusion that tenure is consistently

and negatively related to turnover. As with age, however, a conceptual model and multivariate studies are necessary to establish the relative contribution of tenure to variance in turnover and to develop a better understanding of the psychology of the tenure effect (Mobley, et al., 1977). In the military, Hand et al., (1977) found that the longer the length of first term enlistment (up to four years), the greater the probability of reenlistment (Haber, et al., 1974; LaRocco, et al., 1975) and that grade or rank (an indirect measure of tenure) is positively related to, and typically one of the most significant factors, predicting reenlistment (Haber, et al., 1974; Lindsay and Causey, 1969).

3. Sex

Porter and Steers (1973) did not have a separate category for sex although they did note an interaction between sex and family size which may be subject to change with current reevaluation of "traditional role differentiation." Price (1977) noted inconsistent findings on the effects of sex and Mobley, et al., (1977a), citing conflicting research findings, found the contribution of sex to turnover, standing alone, or in conjunction with other variables, remains unclear. Hand, et al., (1977) do not comment on the effect of this variable in the military literature.

4. Family Responsibilities

Porter and Steers (1973) concluded that family size and family responsibilities were generally found to be positively related to turnover among women while their impact on men appears to be mixed. Price (1977) did not

include these variables in his review. Mobley, et al., (1977a) cite three of four recent studies which supported the proposition that family responsibility, including marital status, is associated with decreased turnover. This finding is contrary to the results presented by Porter and Steers (1973). However, Mobley, et al., (1977a) note that this set of variables is likely to covary with other variables such as age, tenure, and sex and that no clear cut conclusion is evident. Hand, et al., (1977), however, noted a consistent finding that the number of dependents a service member has serves to increase the probability of reenlistment.

5. Education

Porter and Steers (1973) did not include this variable in their review. Price (1977) concluded that better educated employees usually have higher turnover, however, this finding is only weakly supported. Mobley, et al., (1977a) conclude that the role of education remains inconclusive and its explication again requires a conceptual model and multivariate analyses. Hand, et al., (1977) noted that education level may be the most consistent predictor of attrition of all of the demographic variables. Six studies consistently found that the higher the level of formal education (i.e. through high school) the more likely the individual would not attrite. In relation to reenlistments, however, the effects of education are mixed. Research results show a positive relationship (LaRocco, et al., 1975); a negative relationship (Enns, 1975); and little impact (Haber, et al., 1974; Nelson, 1970), on reenlistment.

6. Weighted Application Blanks (WAB)

Mobley, et al., (1977a) concluded that while the utility of WAB's for employee selection continues to require situation specific validation (and regular cross validation), standing alone they offer little contribution to understanding the psychology of turnover processes.

7. Other Personal Variables

Mobley, et al., (1977a) cite various studies dealing with personality, distance migrated, and number of previous jobs. They conclude that because of the small number of studies, no generalizations were possible. Hand, et al., (1977) note that marital status of the parents has been found in one study to be related to attrition. The study found that recruits whose parents were living together had higher effectiveness scores than when one or both were deceased, separated, or divorced. Further, the study noted that recruits whose parents were living together also had higher effectiveness scores than adopted individuals or individuals from a foster home. Six studies reviewed by Hand, et al., (1977) reported race to be related to reenlistment. Two of the studies found that race had little impact on reenlistment while the remaining four studies concluded that minorities were more likely to reenlist than non-minorities. Whether or not methodological differences used in these studies could account for the difference in findings was not readily determinable. Additionally, Hand, et al., (1977) found that the military occupation of the service member was an important factor in influencing reenlistment. Region of the country was also found to be related to reenlistment with individuals from the west

having the highest probability of reenlisting. While the population size of the county of residence prior to enlistment had little impact on reenlistment, individuals from low income states were found to have the highest rate of reenlistment. Finally, reenlistees were more likely to have been brought up in poorer homes than those not reenlisting.

8. Summary of Individual Demographic and Personal Factors

Of the personal variables reviewed in this section, age and tenure stand out as being consistently and negatively related to turnover. Younger employees and employees with shorter length of service are generally higher turnover risks (Mobley, et al., 1977a). The other remaining personal variables were weakly or inconclusively related to turnover. The military studies reviewed by Hand, et al., (1977) suggest that education level may be the most consistent predictor of attrition among the biographic/demographic variables. Its effectiveness in predicting retention, however, is questionable. Hand, et al., (1977) note that with the exception of one study, the variance explained by demographic/biographic predictors rarely exceeded 10%. The utilization of these variables as predictors seems to be based on the intuitive theory that those individuals who leave the military, either through attrition or withdrawal, bring into the military a completely different set of personal characteristics from those who remain. Further, that given adequate time, money, resources, etc., these characteristics can be identified, and the results will be a more accurate selection of individuals. It appears, however, that the use of demographic/biographical data by themselves, will be inadequate as long as important situational constraints and

realities of the military are not also given explicit, concurrent consideration. A more comprehensive view of factors affecting attrition and retention is required.

B. OVERALL JOB SATISFACTION AND TURNOVER

Porter and Steers (1973) concluded that a consistent negative relationship was shown between turnover and job satisfaction. They further noted that this finding was consistent with previous reviews of turnover literature. Price (1977) is in agreement and noted that satisfaction, together with opportunity, were the primary intervening variables between "structural variables" and turnover. With the exception of one study, Mobley, et al., (1977a) conclude that their review continues to indicate a consistent negative relationship between overall satisfaction and turnover. They note, however, that the amount of variance being accounted for is consistently less than 14%. Further, that when satisfaction is included in multiple regressions with variables such as intentions and commitment, its effect on turnover may become non-significant. Hand, et al., (1977) conclude that methodological problems in the research studies reviewed generally precluded drawing meaningful conclusions between job satisfaction and reenlistment-both actual and intended. Hand, et al., (1977) cited two studies in which job satisfaction accounted for 35% and 31% of the variance. However, when taken alone, job satisfaction accounted for only 7.6% and 15% , respectively, of these same studies. The remaining studies provided even less evidence that a strong relationship exists between satisfaction and withdrawal behavior.

C. ORGANIZATIONAL AND WORK ENVIRONMENTAL FACTORS

1. Pay and Promotion

Porter and Steers found that pay and promotion appear to represent significant factors in the turnover process. Price (1977) concluded that existing data support the hypothesis that successively higher amounts of pay will probably produce successively lower amounts of turnover. Price (1977) also noted that promotional opportunities or upward mobility, while related to lower turnover, has been insufficiently studied to claim strong support. Mobley, et al., (1977a), however, noted a general lack of relationship between both pay satisfaction and turnover and satisfaction with promotion and turnover. The inconsistency between the studies reported by Mobley, et al., (1977a) and those reviewed by Porter and Steers (1973) and Price (1977) can be explained as resulting from differences in economic conditions; the level of the position being studied; absolute pay levels; and the recent heavy reliance on a single measure of pay and promotion satisfaction (i.e. the Job Description Index). The suggestion was made that multiple measures of satisfaction should be used whenever possible so that more can be learned about the implications of alternative satisfaction scales (Gillet and Schwab, 1975). In their review, Hand, et al., (1977) concluded that many of the actual reenlistment studies either had questionable methodology and/or accounted for small amounts of variance. Only one study (Quigley and Wilburn, 1969) accounted for a very large percentage of the variance (79.2%) by using a relatively large number of appropriate independent variables. Pay and its substitute (estimated

civilian earnings) were found to be predictors of actual reenlistment. The studies which reported on reenlistment intentions produce a somewhat confusing array of conclusions. Pay did not appear to be a potent predictor of intention to reenlist. Further, pay and fringe benefits essentially do not affect intention to reenlist, but do affect intention not to reenlist. One explanation of these seemingly contradictory results would be that "other" variables within the services or the economic environment completely overpower pay as a predictor. These "other" variables are perceived differently by those intending to reenlist and those not intending to reenlist. Those not intending to reenlist could possibly, but not certainly, be convinced by higher pay to reenlist. No analysis was made for the quality of potential reenlistees in either category. Overall, Hand, et al., (1977) conclude that the studies reviewed indicated that the amount of variance accounted for by pay was relatively small.

2. Organizational Size

Porter and Steers (1973) and Price (1977) both found that an inconclusive relationship existed between organizational size and turnover. Porter and Steers (1973) did find a positive relationship between unit size and turnover for blue collar levels but an inconclusive relationship for white collar workers. Mobley, et al., (1977a) and Hand, et al., (1977) reviewed no further literature dealing with this variable.

3. Supervision

Porter and Steers (1973) concluded that turnover was negatively related to supervisory consideration, perceptions

of equitable treatment, amount of supervisory feedback, and understanding of job requirements and methods. Price (1977), while not dealing directly with supervisory style as a variable, found that instrumental communications (directly related to role performance) and formal communications are negatively related to turnover. Mobley, et al., (1977a) concluded that moderate support for the negative relationship between supervision and turnover existed in the recent literature. However, the number of studies which found no significant relationship between satisfaction with supervision and turnover indicated a need to: more closely examine the nature of our leadership measures; conduct more micro-analyses of the leader-member exchange (Graen and Ginsburgh, 1977); and assess the contribution of supervision in multivariate designs which consider other salient variables. Hand, et al., (1977) did not specify supervisory style as a separate discussion variable. In two of the studies reviewed (Carlisle, 1975; Glickman, et al., 1973) however, supervision was noted as having a weak, negative relationship to reenlistment intentions. The amount of variance explained by the variable "supervision" standing alone is not provided. Accordingly, no generalizations or conclusions about this relationship can be made.

4. Peer Group Relations

Porter and Steers (1973) concluded that a positive relationship between satisfaction with co-workers and propensity to remain was evident in most of the studies they reviewed, although there were some exceptions. Price (1977), utilizing the variable integration, i.e. the extent of member participation in primary and/or quasi-primary relationships, concluded that successively higher amounts of integration will probably produce successively lower amounts

of turnover. Mobley, et al., (1977a) concluded that the studies they reviewed did not support the generalization of a strong relationship between group relations and turnover. Individual differences in such variables as need for affiliation; contribution of other variables, e.g. required task interaction, external job alternatives; and the method of measuring group relations, contribute to the difficulty in explicating these findings. Hand, et al., (1977) did not review any studies which directly measured the effects of peer group relations and offered no conclusions in this area.

5. Other Variables

Mobley, et al., (1977a) cited the following conclusions relating turnover to other organizational and work environment factors: a negative relationship between perceived status and turnover; knowledge of organizational procedures and perceptions of control processes were negatively related to turnover; role pressures, climate and satisfaction with the company were not significantly related to turnover; a significant negative correlation between satisfaction with hours of work and turnover existed among retail clerks; and a weak but significant negative correlation between resource adequacy and turnover.

Hand, et al., (1977) concluded that the military literature to date has shown minimal evidence to establish a strong positive relationship between organizational policies and practices and various forms of withdrawal behavior. The results of their review found one multivariate study which indicated that organization practices accounted for a relatively small percentage of the variance in withdrawal behavior and that no meaningful conclusions for future action may be drawn from the balance of the studies

reviewed.

With respect to organizational climate and withdrawal behavior, Hand, et al., (1977) concluded that minimal evidence existed that establishes a strong relationship between them.

6. Summary

The recent research on organizational and work environment factors is generally inconsistent. This is somewhat surprising, especially with respect to the satisfaction with supervision and pay. Both Porter and Steers (1973) and Price (1977) indicated support for a negative relationship between pay satisfaction and turnover; further, Porter and Steers (1973) described a consistent negative link regarding the relationship between supervision and turnover (Mobley, et al., 1977a). The literature reviews performed by Mobley, et al., (1977a) and Hand, et al., (1977) failed to support this relationship. While the reasons for this inconsistency are not clearly defined, Mobley, et al., (1977a) suggest that a general lack of multivariate research designs and incomplete conceptual models of the turnover process contribute to the inability to adequately interpret the role of organizational, work environment, and other factors in employee turnover.

D. JOB CONTENT FACTORS

Porter and Steers (1973) concluded that, in general, turnover has been found to be positively related to dissatisfaction with the job- specifically, with respect to

insufficient job autonomy or responsibility. Turnover was also related to role clarity and task repetitiveness, with the latter exhibiting a positive but perhaps oversimplified relationship. Mobley, et al., (1977a) noted that although Price (1977) did not include job content as a major determining variable in turnover, he did conclude that centralization, (degree to which power is concentrated), a concept related to autonomy, is a primary determinant of turnover, i.e. successively higher amounts of centralization will probably produce successively higher amounts of turnover. Price (1977) also concluded that instrumental communication (directly related to role performance) and formal communication (officially transmitted communication) are negatively related to turnover. These concepts, although related to supervisory style, are positively related to role clarity, especially as measured by Graen and Ginsburgh (1977) in their treatment of the leader-member exchange. Mobley, et al., (1977a) concluded that the recent research on job content factors supports the conclusion of a consistent negative relationship with turnover. However, they again note that a relatively small percentage of the criterion variance was explained. Mobley, et al., (1977a) concluded that the military literature has shown minimal evidence that job content is strongly related to withdrawal behavior.

E. EXTERNAL ENVIRONMENT

Porter and Steers (1977) did not include the consideration of external factors in their review. Price (1977) acknowledges the effects of economic indicators and turnover rates but did not include this area in his review. Mobley, et al., (1977a) state that conceptually, the perception and evaluation of alternatives would seem to be a

crucial variable in the individual turnover process. Empirically, assessment of the relationship between turnover and personal, organizational, job content, and/or other variables is inexorably bound to consideration of the perception and evaluation of alternatives.

Summarizing the limited amount of recent research dealing with alternatives, Mobley, et al. (1977a) conclude that: the aggregate level negative relationship between unemployment and turnover and the positive relationship between unfilled vacancies and turnover rates was reaffirmed in one study; expectancy of finding an alternative (job) moderated the correlations between attitude and turnover; and expectancy of finding an acceptable alternative was significantly and positively related to intention to quit but not actual quitting, although intention to quit was significantly and positively related to turnover.

Hand, et al., (1977) included the effects of alternatives in their review of personal expectations. Three studies were listed which were germane. The first, Glickman, et al. (1973) found that job goals on the outside which appeared to be more appealing was a negative factor affecting the enlistment decision of those who did not enlist. Mobley, et al., (1977b) found that the expectancy of finding an acceptable civilian job accounted for .6% of the variance of attrition behavior of 1690 Marine recruits. Finally Schneider (1973) suggested that the desirability and availability of alternatives to the Navy would influence the individual's reenlistment and career intentions. Schneider (1973) found that the sample, overall, expected that civilian work and the civilian work environment was more attractive than the Navy. As one would expect, reenlistment and career intentions were positively related to Navy attraction ($r^2=.17$ and $r^2=.13$, respectively). A difference score was calculated from the two attraction indices to

examine the influence of the alternative work context. This difference score was then correlated with both reenlistment and career intentions. The results of this analysis showed an improvement in prediction results and indicated that as attraction to the civilian work role increased, the intention to participate in the Navy decreased (Mobley, et al., 1977a).

Thus, while seemingly related to turnover, the amount of variance explained by the external environment remains small. It is believed that more theoretical specification is needed in order for the concept to be useful in prediction (Mobley, et al., 1977a).

F. OCCUPATIONAL GROUPINGS

Porter and Steers (1973) did not use occupational groupings as a primary classification variable. Price (1977) concluded that moderate support existed for the proposition that unskilled blue collar workers have higher turnover than white collar. Additionally, he found little support for the hypotheses that: nonmanagers have higher turnover than managers; that nongovernment employees have higher turnover than government employees; and that higher professionalism is associated with higher turnover. Mobley, et al., (1977a) did not specifically review any studies of occupational groupings but suggest that organizational variables such as occupational position levels, may be better predictors of behavior than demographic or personality variables. Hand, et al., (1977) did not include studies utilizing this variable for analysis.

G. ORGANIZATIONAL COMMITMENT, INVOLVEMENT, AND JOB ATTACHMENT

Since this classification variable has grown out of the results of more recent studies, Porter and Steers (1973) and Price (1977) did not include it in their respective reviews. Mobley, et al., (1977a) cite recent studies which have concluded that: commitment was significantly and negatively related to turnover and more strongly related than satisfaction; a weak negative correlation existed between commitment and turnover among Japanese employees; organizational involvement, one component of commitment, was significantly and negatively related to turnover; and job attachment was significantly and negatively related to turnover .

The developing body of research on commitment and attachment suggests that these concepts are significantly and negatively related to turnover and more strongly related than satisfaction. However, both commitment and attachment, as defined in the research cited above, are such complex constructs as to make generalizations rather tenuous at this time. For example, is it the inclusion of intentions in the operational definition of commitment and attachment that accounts for its relatively better prediction of turnover? Is it not possible that congruence between individual and organizational goals and values could vary independently of the other two components of commitment? Perhaps a more micro-analytic treatment of these concepts would possess utility (Mobley, et al., 1977a). Hand, et al., (1977) did not include this classification variable in their review.

H. EXPECTATIONS

Porter and Steers (1973) predicted that when an individual's expectations - whatever they are - are not substantially met, his propensity to withdraw would increase. Mobley, et al., (1977a) concluded that direct support of the met expectation hypothesis was rather weak. They cite Ilgen and Dugoni (1977) who concluded that it is naive to expect realistic job previews to influence satisfaction and subsequently turnover through the mechanism of met expectations. They suggest that the met expectations hypothesis inadequately reflects individual differences in values inaccurately implies that met expectations can compensate for deficiencies in the immediate job environment. As previously noted, Hand, et al., (1977) concluded that the variable "expectations" appears to account for a relatively small percent of the variance with respect to personnel withdrawal.

I. PERFORMANCE

Performance, as a classification variable, was only listed in the Hand, et al., (1977) review. They concluded that performance variables, which include both performance before entry into the service, and performance while in the service, appear to add to prediction of the withdrawal behavior criteria. However, the amount of variance accounted for is relatively small.

J. BEHAVIOR INTENTIONS

Mobley, et al., (1977a) concluded that behavioral intentions to remain or quit are consistently related to turnover behavior and that this relationship generally accounts for more variance in turnover than does the satisfaction-turnover relationship. However, intentions still accounted for less than 24% of the variance in turnover. Additionally, without analyses of the precursors of intentions, little knowledge of the psychology of the turnover behavior is generated. Mobley, et al., (1977a) call for additional research on the antecedents and covariates of intentions, the manner in which intentions change over time, and the reasons for lack of even a stronger relationship between intentions and turnover. Hand, et al., (1977) concluded that intentions are most accurate as predictors of behavior when they are obtained reasonably close to the actual behavior (Graen and Ginsburgh, 1977). However, even under this condition, prediction is poor. In general, the research results agree that behavioral intentions are predictors of turnover. However, the magnitude of the variance accounted for by behavioral intentions is small.

K. SUMMARY OF THE LITERATURE REVIEW

Figure 1 provides a summary of the conclusions noted in the Porter and Steers (1973); Price (1977); Mobley, et al., (1977a) and Hand, et al., (1977) reviews. This summary is an expansion of the Mobley, et al., (1977a) summary (Table 13) and includes the conclusions noted by Hand, et al., (1977)

in their military review. As in the Mobley, et al., (1977a) review, an attempt has been made to maintain the integrity of the various authors' classification schema yet to call attention to possible overlap in classification groupings by the placement of the categories within Figure 1. In interpreting the figure, "negative" refers to a negative relationship, i.e. the higher the variable the lower the turnover while "positive" refers to a positive relationship. In the case of nominal variables, the nature of the relationship is specified.

The qualifiers "consistent", "moderate", "weak", or "inclusive" are used in Figure 1. These qualifiers refer to the consistency with which a significant relationship was found and to the relative number of studies reporting such a relationship. These qualifiers do not refer to the strength of a relationship in terms of the size of a correlation or variance explained. As was noted in the previous sections, few of the bivariate relationships accounted for more than 20% of the variance in turnover.

Table 1

Summary of Four Reviews of the Turnover Literature

Variable	Porter and Steers	Price	Mobley et al.	Hand et al.
<u>Personal Characteristics</u>				
Age	consistent negative	consistent negative	consistent negative	inconclusive
Tenure	consistent negative	consistent negative	consistent negative	consistent negative
Similarity of Job/Vocational Inter- est	weak negative			
Personality Characteristics	weak negative for extreme traits			
Family Size and Responsibilities	generally positive for women, inconclusive for males			generally negative
Sex		inconclusive	inconclusive	
Education		weak positive	inconclusive	inconclusive
Weighted Application Blanks			moderate positive	
Overall Job Satis- faction	consistent negative	consistent negative	consistent negative	generally negative
<u>Organizational and Job Characteristics</u>				
Pay	consistent negative	consistent negative	inconclusive	inconclusive

Table 1 (continued)

Variable	Porter and Steers	Price	Mobley et al.	Hand et al.
Promotion	consistent negative	weak negative	inconclusive	inconclusive
Size-Organization	inconclusive	inconclusive		
Size-Work Unit	consistent positive for blue collar, in- conclusive for white collar	inconclusive		
Peer Group Inter- action	moderate negative		inconclusive	
Integration		consistent negative		
Supervision Style	consistent negative		moderate negative	weak negative
Instrumental Communication		consistent negative		
Formal Communication		consistent negative		
Role Clarity	consistent negative			
Job Autonomy and Responsibility	consistent negative			
Centralization		consistent negative		
Task Repetitive- ness	moderate positive	weak positive		
Overall Reaction to Job Content	consistent negative		consistent negative	inconclusive

Table 1 (continued)

Variable	Porter and Steers	Price	Mobley et al.	Hand et al.
<u>Occupational Groupings</u>				
Blue Collar: Skilled vs. Unskilled		moderate (unskilled higher)		
Blue Collar vs. White Collar		moderate (blue collar higher)		
Nonmanagers vs. Managers		weak (nonmanagers higher)		
Nongovernment vs. Government		weak (nongovernment higher)		
Professionalism		weak positive (professionalism higher)		
<u>External Environment</u>				
Level of Employment/ Opportunity		consistent positive	consistent positive	consistent positive
Perceived Alternatives			weak positive	weak positive
<u>Recently Studied Variables</u>				
Intentions to Quit			consistent positive	consistent positive
Commitment/Attachment			consistent negative	
Met Expectations			weak negative	weak negative

The present review, in agreement with the earlier reviews, found age, tenure, overall job satisfaction, and reaction to job content to be consistently and negatively associated with turnover. Among the more recently studied variables, intentions, and commitment-attachment were found to consistently relate to turnover. Due to the relatively few multivariate studies, an ordering of these variables in terms of relative contribution to turnover is tenuous. However it would appear that intentions and commitment-attachment (which include intentions) make a stronger contribution to turnover behavior than do satisfaction and demographic variables (Mobley, et al., 1977a).

Porter and Steers (1973) proposed a negative relationship between supervisory style and turnover which was moderately supported by Mobley, et al., (1977a) and, to a lesser extent, by Hand, et al., (1977). The effects of pay, promotion, organizational size, and peer group relations was inconclusive. The effects of alternative employment options on turnover behavior appeared to be conceptually important but only weakly supported in the research reviewed.

Finally, the limited number of multivariate studies indicate that: greater variance in turnover can be explained using multiple variables; a great deal of variance is still unaccounted for; inclusion of intentions significantly enhances the prediction of turnover; and satisfaction is an inadequate summary variable for capturing the effects of other demographic, organizational, occupational or external

variables (Mobley, et al., 1977a).

III. METHODOLOGY

The hypothesis to be tested in this study is whether the Navy Human Resource Management Survey can provide information which can be effectively utilized in personnel retention management actions. Specifically, it is hypothesized that units having high levels of personnel retention will display a "retention profile" - as defined by mean scores on key questions in the Human Resource Management Survey - that is different from units having low retention levels.

The purpose of the methodology section will be to:

- 1) Describe the Navy's Human Resource Management Survey.
- 2) Describe the sample.
- 3) Describe the analytical approach taken in the utilization of the Navy Human Resource Management Survey for this thesis.

A. THE SURVEY OF ORGANIZATIONS

The Navy's Human Resource Management Survey is similar to the Survey of Organizations (Taylor and Bowers, 1972) developed by the University of Michigan's Institute for Social Research. The Survey of Organizations questions were constructed to assess various facets of organizational behaviors and were based on Likert's (1961, 1967) metatheory

of organizational behavior.

Likert (1967) theorized that job satisfaction and performance were the result of organizational climate and leadership behaviors. The construct of organizational climate was seen as a multidimensional phenomenon and perhaps can be most clearly understood in terms of Taguiri and Litwins's (1968) definition:

"Climate is a relatively enduring quality of the internal environment of an organization that (a) is experienced by its members, (b) influences their behavior, and (c) can be described in terms of the values as a particular set of characteristics (or attributes) of the organization."

The theory upon which the survey was based focuses upon organizations as social systems. Systemic "outcomes" appear to be the most appropriate criteria for the surveys validation (i.e., volume, efficiency, and quality of work). Other criteria, such as attendance, development, and human cost, etc, are important in that they are affected by these fundamental systemic outcomes (Likert and Bowers, 1969; Bowers, 1971; Drexler, 1973).

The theoretical development of the Survey of Organizations was based primarily on civilian samples. It had also been administered to Navy populations as part of a study to assess the impact of changing work life values and preferences on Navy managerial methods (Bowers and Bachman, 1974). After 2 years of study, Bowers and Bachman concluded that Likert's model is reasonably applicable and valid for both Navy and civilian organizations. Similarly, Crawford and Thomas (1975) predicted that the considerable body of research on both the construct and predictive validity of the Survey of Organizations appeared to support the

likelihood that similar results will be found with the Navy Human Resource Management Survey.

B. THE NAVY'S HUMAN RESOURCE MANAGEMENT SURVEY

The Navy's Survey, based on the Survey of Organizations, was developed and tested in 1971. The survey was developed as a standardized questionnaire designed to support the Navy Human Goals Plan. The purpose of the survey was to measure unit work environment data which when analyzed, would provide each command with information to assist in future command action planning. Specifically, the survey was designed to be used to assist each command focus on and deal with problems in the areas of race relations, equal opportunity, drug and alcohol abuse, and command management (NAVPERS 15264).

The Human Resource Management Survey was developed as follows:

- 1) Many questions from the Survey of Organizations were adapted for use with Navy personnel through changes in terminology (e.g., the term 'organization' became 'command').

- 2) Additional survey questions were generated as a result of earlier efforts by Navy specialists in command development programs.

- 3) Survey questions specific to contemporary social areas and programs were added as diagnostic aids for directing subsequent efforts within a command.

- 4) Once the initial Navy survey questionnaire was

developed, it was tested and modified by subsequent statistical analyses (Drexler, 1974).

5) The Navy Personnel Research and Development Center (NPRDC) subsequently added minor refinements to produce the Bureau of Naval Personnel (BUPERS) 5314 Publication Control Number 09 (form 09).

C. SURVEY DESIGN

The Human Resource Management Survey (Appendix A) currently contains 88 core questions and 30 optional or supplementary questions. The questions are divided into 4 major dimensions:

1. Command Climate
2. Supervisory Leadership
3. Peer Leadership
4. Work Group Processes

Each dimension is further divided into indices. A description of each dimension and its indices can be found in Appendix B.

Although the survey has been "standardized" and widely used for several years, it has also been updated and revised periodically to reflect improvement in question wording and elaborations of its underlying model. Based on evidence from research of various aspects of organizational functioning, the Navy has supported the relationships measured by the Human Resource Management Survey to Navy

organizational outputs, including aviation safety (Fink and West, 1977), naval aviation squadron maintenance performance (Shields and Walls, 1978) and refresher training (Mumford, 1976; Speed, 1978).

However, it is important to note that the Human Resource Management Survey contains data which are aggregated at the unit level and cannot be applied to examine individual behavior. Additionally, the data are gathered at a single point in time and, since historical factors change relatively frequently (e.g., change of command, policies, and personnel), the data may not be relevant for prediction (Goodstadt and Glickman, 1975). Accordingly, no attempt will be made in this study to predict individual retention/turnover decisions or command retention rates. The primary focus of this thesis, then, will be an assessment of the Human Resource Management Survey as a source of valid descriptive information to assist in the personnel retention management area.

1. The Sample

The Human Resource Management sample is composed of approximately 500,000 Navy enlisted and Officer respondents. The personnel are surveyed when their respective command undergoes a Human Resource Availability - which is periodically conducted on a 12 to 18 month cycle. Issuance of the Human Resource Management Survey during the Human Resource Availability is mandatory (NAVPERS 15264). All command personnel are required to participate in the Survey which is administered by Human Resource Management Center personnel providing Human Resource Availability services.

Due to surveys being administered in 12 to 18 month cycles and tour lengths being normally from two to four

years, multiple survey responses are probable from some individuals.

The sample chosen in this research is composed of respondents who completed the survey during the first quarter of calander year 1978. The sample was selected for the following reasons: 1) availability to the researchers, 2) the currency of the Survey results, and 3) the data processing limitations at the Naval Postgraduate School computer center.

As this thesis was limited to first and second term reenlistment behavior, the sample selected was E-6 personnel and below.

A simple demographic breakdown of the research sample is provided in Table 1:

Table 1
SAMPLE DEMOGRAPHIC BREAKDOWN

<u>Variable</u> <u>Name</u>	<u>Absolute</u> <u>Frequency</u> <u>Count</u>	<u>Relative</u> <u>Frequency</u> <u>(pct)</u>
Sex		
Male	27993	96.8
Female	842	2.9
Missing	78	0.3
Total	28913	100
Race		
Polynesian	90	0.3
Chinese	81	0.3
White	22815	78.9
Spanish	1158	4.0
Malayan	1456	5.0
Black	2658	9.2
Native American	396	1.4
Missing	259	0.9
Total	28913	100
Marital status		
Single	15759	54.5
Married	11393	39.4
Other	1701	5.9
Missing	60	0.2
Total	28913	100

TABLE 2 - SAMPLE DEMOGRAPHIC BREAKDOWN Cont

Education		
< High School	3042	10.5
High School Grad	18680	64.6
Some College	6633	22.9
BA/BS	382	1.3
MS or more	19	0.1
Missing	157	0.5
Total	28913	100
Time On Board		
0 to 3 mos	2793	9.7
3 to 6 mos	3011	10.4
6 mos to 1 yr	5798	20.1
1 to 2 yr	8790	30.4
2 to 4 yrs	7642	26.4
4 or more yrs	528	1.8
Missing	351	1.2
Total	28913	100
Time in Work Group		
< 1 mo	2263	7.8
1 to 6 mos	7475	25.9
6 mos to 1 yr	6410	22.2
1 yr or more	12387	42.8
Missing	378	1.3
Total	28913	100
Years in Navy		
1	3956	13.7
2	6063	21.0
4	2262	7.8
5	1409	4.9
6	1128	3.9
7 to 19	5367	18.5
Missing	3610	12.5
Total	28913	100

TABLE 2 - SAMPLE DEMOGRAPHIC BREAKDOWN Cont

Age		
17 to 20	8260	28.6
21 to 24	10769	37.2
25 to 29	5016	17.3
30 to 34	2619	9.1
35 and over	1498	5.2
Missing	751	2.6
Total	28913	100
Paygrade		
E-1 - E-3	11766	40.7
E-4 - E-5	13033	45.1
E-6	4114	14.2
Total	28913	100
Reenlistment Intention		
Eligible + plan retire	190	0.7
Remain untill elligible - for retirement	4510	15.6
Will reenlist	3574	12.4
Undecided	5999	20.7
Will not reenlist	14338	49.6
Missing	302	1.0
Total	28913	100
Time Remaining		
< 6 mos	2565	8.9
6 mcs to 1 yr	2805	9.7
1 yr to 2 yrs	7771	26.9
More than 2 yrs	15551	53.8
Missing	221	0.8
Total	28913	100
Fleet		
Pacific	7882	27.3
Atlantic	14951	51.7
Missing or shore	6080	21.1
Total	28913	100

TABLE 2 - SAMPLE DEMOGRAPHIC BREAKDOWN Cont

Type Command		
Air	4209	14.6
Surface	16746	57.9
Subsurface	1345	4.7
Reserve ¹	344	1.2
Missing or shore	6269	21.7
Total	28913	100

 1 Not identified as to type command in survey.

D. DESCRIPTION OF METHODOLOGY

The purpose of this thesis is to provide a method for unit Commanding Officers to improve unit retention management through effective use of the Human Resource Management Survey. To accomplish this purpose, the following assumptions were made:

1. The Human Resource Management Survey is a valid instrument for measuring organizational factors, as noted in independently conducted validity studies.

2. Stated "intentions" toward reenlistment account for the greatest amount of variance in turnover behavior, as previously cited.

Although stated intentions are predictors of future behavior, they of themselves do not necessarily describe the factors involved in that behavior. In order to better understand these factors, a stepwise multiple regression analysis of the Navy's Human Resource Management Survey data was performed.¹ Stated career intentions (the dependent

- - - - -

¹ Due to the large sample size, statistical significance has no practical significance in that it was common to most of the variables tested. Therefore, squared correlation coefficients were used to indicate the strength of the relationship of the variables with respect to reenlistment intention. The squared correlation coefficient indicates the proportion of variation in reenlistment intention that is explained by the independent variable(s).

variable) was regressed on the various survey dimensions, indices and questions. The results of the regression analysis will be compared to results of the research findings previously discussed in the literature review. This comparison will provide an initial assessment of the Human Resource Management Survey's utility in providing useful information for Navy enlisted personnel management decisions.

The fourth section of the thesis will analyze the ability of the Human Resource Management Survey to differentiate between units having high and low retention rates. The hypothesis being tested in this section is whether or not units having either high or low retention rates develop "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other. To this end, discriminate analyses of the Human Resource Management Survey scores of various fleet units will be accomplished in order to differentiate among them with respect to their respective personnel's stated intentions toward reenlistment. It is hypothesized that these "retention profiles" can be developed from the survey data. If successful, these "profiles" can be used by unit commanders for improved retention management decisions.

IV. RESULTS

A. REGRESSION ANALYSIS

In the literature review, it was noted that stated intentions are consistently related to retention. Further, this relationship generally accounts for more variance in turnover than does the satisfaction-turnover relationship (Mobley, et al., 1977a). While stated intentions appear to be the best predictors of future behavior, they fail to describe the psychological processes involved in determining that behavior.

In this section, an attempt has been made to better understand the elements and processes involved in the reenlistment decision. A stepwise multiple regression analysis was performed on the Navy's Human Resource Management Survey data in an effort to identify the factors which account for the variance in the reenlistment decision.

In the stepwise multiple regression analysis, "career intentions", measured by demographic question 14 of the survey, was regressed against the five major dimensions of the survey: Command Climate, Supervisory Leadership, Peer Leadership, Work Group Processes, Satisfaction and Other. This statistical technique provides an evaluation of the extent to which a specific variable or set of variables contributes toward influencing an individual's stated intent

to reenlist.¹

The results of the initial stepwise multiple regression analysis are presented in Table 2.

Table 2
REGRESSION RESULTS OF INTENT ON
DIMENSIONS

<u>Dimension</u>	<u>R-Square²</u>
Satisfaction and Other ³	.092
Command Climate	.008
Peer Leadership	.003
Work Group Processes	.001
Supervisory Leadership	0.00

1 A complete description of regression analysis can be found in Statistical Package for the Social Sciences (Second Edition), by Nie Hull, Jenkins, Steinbrenner, and Bent, 1970, McGraw-Hill, Inc., p. 320.

2 The R-square statistic is the square of the correlation coefficient. It represents the amount of variance in the dependent variable (career intention) which is accounted for by the various independent variables (in this case, survey dimensions).

3 Consists of the Satisfaction Index and Additional Indices designed to measure supplementary organizational factors (See Appendix A).

As shown above, the five dimensions of the Human Resource Management Survey, considered together, account for only 10.4% of the variance of career intent. This finding is generally consistent with previously reviewed research in that the satisfaction dimension accounted for the greatest amount of the variance (9.2%) out of all the survey dimensions. (Mobley, et al., 1977a; Hand, et al., 1977). However, these results are inadequate in identifying the psychological processes affecting the retention decision.

A second stepwise multiple regression analysis was performed with stated intent regressed on the twenty-five survey indices. The results of this analysis are provided below:

Table 3
REGRESSION RESULTS OF INTENT ON INDICES

<u>Index</u>	<u>R-Square</u>
Satisfaction Index	.119
Motivation Index	.019
Overseas Diplomacy Mission Element Index	.010

NOTE: Survey indices contributing less than one percent to the variance of career intent were not included in the above table. A complete listing of the regression results of intent on indices is provided in Appendix C.

The analysis results shown in Table 3 indicate that three primary survey indices, considered together, account for a greater total amount of the variance with respect to career intent than do all of the major survey dimensions combined (14.8%). The dominant survey index is Satisfaction (Index 19), which measures the extent to which personnel within the command are satisfied with their supervisors, the command, other work group members, their jobs, and their present and future progress in the Navy. Given this description, it is not surprising to find this variable accounting for a majority of the total variance explained. In fact, removal of the Satisfaction Index from the "Satisfaction and Other " dimension caused that dimension to lose all effect in the regression equation.

The two remaining indices accounting for the most variance were Motivation (Index 3) and Overseas Diplomacy (Index 25). The Motivation Index measures the extent to which a command, through its practices and policies, provides motivating conditions for personnel to contribute their best efforts. The Overseas Diplomacy Mission Element Index measures the extent to which personnel are conscious of and concerned with their image overseas. The Motivation Index (Index 3) accounted for an additional 1.9% of the variance and the Overseas Diplomacy Index (Index 25) added an additional 1.0% to the total.

The remaining survey indices, considered together, contributed an additional 2.8% to the amount of total variance accounted for in the analysis.

It was the authors' original intention to utilize the various survey dimensions and indices to develop the unit's "retention profile". However, the results of the regression analysis presented above precludes their utilization as

intended. Why were the survey dimensions and indices, both of which included all eighty-eight survey questions, unable to account for more than 17.6% of the variance of stated intent to reenlist? Are the survey dimensions and indices adequately measuring the areas they were designed to measure, as was originally assumed? Do the survey dimensions and indices provide additional useful information when analyzing survey responses?

In an effort to answer some of these questions, a factor analysis of the Human Resource Management Survey was performed. An abbreviated factor analysis variance summary is provided in Appendix D. These results indicate that, when limiting the analysis to only 25 factors (which equals the current number of survey indices), only 69.2% of the variance of the survey questions is accounted for by the factors. While these 25 factors may not be the exact equivalent of the 25 indices currently in the survey, the results of this analysis suggest that limiting the analysis of survey responses by only considering them with respect to designated indices results in the loss of a substantial amount of useful information.

An abbreviated factor analysis matrix using principal factors, with no iterations, is provided in Appendix E. This matrix lists the five most significant factors (i.e. contributed at least 2.0% to the variance accounted for and having an Eigenvalue > 2.0) and their five highest contributing factor weights. The results shown in Appendix E indicate that, although five factors exist (which equate in number to the five dimensions now in use), the question loading for each of the factors does not substantiate the question structure of the current survey dimensions. This is more clearly seen in Appendix F.

The results of the factor analysis of the survey

questions, rotated, and limited to only five factor variables, is provided in Appendix F. These results, when compared with the currently structured survey dimensions, indicate that the first three survey dimensions (command climate, supervisory leadership, and peer leadership), and their respective survey questions, are strongly defined by the factor analysis and can be easily discerned by observing the clustering of the survey questions. The fourth survey dimension (work group processes) is not distinguishable from the preceeding survey dimension (peer leadership) when inspecting the clustering of the survey questions. Thus, it appears doubtful that this dimension effectively measures "work group processes" apart from "peer leadership". Finally, the fifth survey dimension (satisfaction and other), as currently structured, cannot be differentiated by analysis of the question clustering. No discernable grouping of the survey questions exists in the fifth dimension to support the decision to consolidate the various, respective survey questions into a single, unified dimension.

Further factor analysis of the survey questions was performed in an effort to test the structure of the currently defined survey indices. Appendix G shows the results of this analysis. As can be seen, only sixteen of the twenty-five survey dimensions were effectively demonstrated in the factor analysis as measuring a single factor variable. It would appear, then, that the remaining nine survey indices are ineffective in measuring the variable which they were designed to measure. This was seen in the small amount of variance accounted for by the survey indices with respect to stated intent to reenlist.

As earlier stated, job satisfaction was a major factor variable affecting stated intent to reenlist and actual personnel turnover. It is reasonable to believe that the

accurate measurement of job satisfaction by the satisfaction index in the survey (questions 51 - 58) would account for a significant amount of the variance of stated intent to reenlist. However, results of the regression analysis showed the satisfaction index (Index 19) accounted for only 11.9% of the variance of stated intent to reenlist. A review of the results presented in Appendix G will provide some explanation as to why the satisfaction index accounted for only a small amount of the variance. The results show that the eight questions grouped into the satisfaction index, and which seem to measure job satisfaction, are in fact measuring four different factor variables. Eight other survey indices also are shown measuring more than one variable. Given this insight, it is not surprising that the information obtained when utilizing the survey dimensions and indices proved of little value in this analysis.

The results of the factor analyses performed in this thesis do not support the structuring of the survey dimensions and indices as they currently exist. Two possible reasons for this are:

1. The analysis by the Institute of Social Research in developing the survey dimensions and indices was insufficient or in error.

2. A change has occurred over time affecting the perceptions of the people who are taking the survey and, subsequently, affecting the trend of the answers received (called a gamma shift).

Further investigation of this issue is beyond the scope of this thesis. However, the results provided here show that sufficient deficiencies exist in the structuring of the Human Resource Management Survey dimensions and indices to warrant future micro-analysis of the problem and, possibly,

restructuring of the survey.

Thus, these results suggest that any theory or model, based on the assumption that the currently structured survey dimensions and indices are valid, should be cautiously considered.

It has been shown that the use of the survey dimensions and indices does not provide additional useful information when analyzing survey responses. On the contrary, the currently defined dimensions and indices detract from the effective analysis of survey data by limiting the amount of variance actually accounted for in the survey questions. Based on the research sample, the factor analysis suggests that significant differences exist between the current structure of the survey dimensions and indices and the actual statistical relationships between the survey questions. Additional future research is recommended to to analyze the validity of the findings presented here.

In addition, it is noted that the Navy Human Resource Management Survey frequently employs causal flow models using the preceding set of dimensions and indices to explain managerial and organizational dynamics. This procedure requires early validation of said dimensions and indices if and credence is to be maintained.

Because the survey dimensions and indices failed to produce the desired strength in accounting for the variance in stated intent to reenlist, a third stepwise multiple regression analysis was conducted on the survey data with intent to reenlist regressed on each of the individual survey questions. The results of the analysis are presented below:

Table 4
REGRESSION RESULTS OF INTENT ON
QUESTIONS

<u>Question</u>	<u>R-Square</u>
56. How satisfied do you feel with your chances for getting ahead in the Navy in the future?	.136
58. Do you regard your duties in this command as helping your career?	.042
7. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?	.021
85. To what extent do you understand your personal role as a representative of the U.S. when overseas?	.015

NOTE: Survey questions which contributed less than one percent to the regression analysis were omitted from the above table. A complete listing of the regression results of intent on questions is provided in Appendix H.

The above results show that the survey questions account for 21.4% of the variance in career intention. Although the total amount of variance accounted for remains small, it is consistent with previous research findings discussed in the literature review. Surprisingly, it very closely approximates the 24% value suggested by Mobley, et al., (1977a) as the "average" amount of variance normally accounted for in the turnover literature.

Table 4 shows that the dominant independent variable with respect to intent is Question 56:

How satisfied do you feel with your chances for getting ahead in the Navy in the future?

However, this variable accounts for only 13.6% of the variance of career intent. Why?

Mobley, et al., (1977a) suggest that satisfaction assesses the respondent's condition only at the time the measurement was taken and has no future reference value. Intent, however, refers to the respondent's commitment to some future course of action. This difference in perspective may account for the general lack of strength in the ability of satisfaction to account for the variance in behavioral intention.

Question 56 asks the respondent to, simultaneously, assess his future expectations for advancement in the Navy as well as his current level of satisfaction with the progress he's already made. Not surprisingly, responses to this question would greatly reflect his commitment to future behavioral action.

The next most influential variable with respect to

career intent, accounting for 4.2% of the variance, is Question 58:

Do you regard your duties in this command as helping your career?

This question, included in the Satisfaction Index, provides a subjective evaluation of one's current occupation with respect to future job opportunities. The results of this assessment, coupled with the above variable, contributes a small amount to determining the retention decision.

The next variable, accounting for 2.1% of the variance in career intent, is Question 7:

To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?

While related to satisfaction, this variable is similar to the first variable in that it measures future behavioral intent. In this question, it appears that one's "motivation to contribute" is directly linked to one's future expectations. Pragmatically, this is not an unexpected finding.

The remaining 85 survey questions did not contribute significantly in accounting for the variance in career intention.

The results of the above analysis suggest that the psychology of the reenlistment decision is based, at least partially, on the following factors:

1. A personal assessment of one's future ability to "get ahead" in the Navy.

2. An assessment by the individual of attaining future expectations of job satisfaction in the Navy based on current satisfaction level.

3. An assessment by the individual of his motivation to contribute future "best efforts" to his job (command).

4. An assessment by the individual of his current duties with respect to future expectations and desires.

These four elements appear to have the greatest significance in affecting the retention decision - or more correctly, a part of the retention decision. For as much as the above statements appear to be the key elements in the retention decision, these elements account for only 21.4% of the variance in that decision. The retention decision, then, has a large number of "other" influences affecting its formulation. The identification and causal influence of these "other" variables will require future, methodologically rigorous, multivariate analysis (Mobley, et al., 1977a).

B. SUMMARY OF REGRESSION ANALYSIS

This section presented several stepwise multiple regression analyses of the Human Resource Management Survey data. The analyses results were compared to the results of research findings previously discussed in the literature review. It was shown that the survey provided results consistent with previous findings and reconfirmed the statistic that satisfaction accounts for only 24% of the variance of career intent (Mobley, et al., 1977a).

Regression analysis of the survey questions provided

some insight into the psychology of the retention decision. However, it was emphasized that the explanations provided were affecting only a small amount of the variance in the turnover decision.

The section concluded that future, methodologically rigorous, multivariate studies were required to better understand the psychology of the retention decision.

This section has shown, in comparison with other research findings discussed in the literature review, that the Human Resource Management Survey data can provide useful information in guiding future Navy enlisted personnel management decisions. Specific utilization of the data in making retention management decisions is the subject of the next section.

C. DISCRIMINANT ANALYSIS

This section of the thesis will analyze the ability of the Human Resource Management Survey to differentiate between units having high and low retention rates. The hypothesis being tested in this section is whether or not units having either high or low retention rates develop "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other. To this end, discriminate analyses of the Human Resource Management Survey scores of various fleet units will be performed in order to differentiate among them with respect to their respective personnel's stated intentions toward reenlistment. It is anticipated that the "retention profiles", developed from the survey data, can be used by unit commanders to assist them in developing improved

retention management strategies.

Discriminant analysis of the Human Resource Management Survey was undertaken to identify and classify those survey questions which are most strongly related to and discriminate an individual's stated intention to reenlist in the Navy.¹

1. Analysis Results

a. Variables Entering the Discriminant Analysis

A stepwise discriminant analysis of the questions in the Human Resource Management Survey was performed with respect to an individual's stated intent to reenlist. The results of this analysis are summarized in Table 5. Of the eighty-eight questions in the survey, twenty-one questions failed to enter the analysis.² Of the remaining sixty-seven questions, only those questions which contributed at least .01 to Wilks' lambda and had an F-ratio > 50 are listed in Table 5.³

- - - - -

1 Often, the researcher is faced with the situation in which there are more discriminating variables than necessary to achieve satisfactory discrimination. If the researcher wishes to select the most useful of these, the stepwise procedure available in the Statistical Program for the Social Sciences is helpful. The stepwise discrimination procedure begins by selecting the single best-discriminating variable according to a user-determined criterion. A second discriminating variable is selected as the variable best able to improve the value of the discrimination criterion in combination with the first variable. The third and subsequent variables are similarly selected according to

- - - - -

1 (Cont) their ability to contribute to further discrimination. At each step, variables already selected may be removed if they are found to reduce discrimination when combined with more recently selected variables. Eventually, either all variables will have been selected or it will be found that the remaining variables are no longer able to contribute to further discrimination. When this point has been reached, the stepwise procedure halts and further analysis is performed using only the selected variables. (Nie, et al., 1977).

2 A complete listing of the discriminant analysis results are provided in Appendix I.

3 Wilks' lambda is computed as each function is derived. Lambda is an inverse measure of the discriminating power in the original variables which have not yet been removed by the discriminant functions- the larger lambda is, the less information remaining. Lambda can be transformed into a chi-square statistic for an easy test of statistical significance. (Nie, et al., 1977, pp. 442-443).

Table 5
QUESTIONS ENTERING DISCRIMINANT ANALYSIS
BY STATED CAREER INTENT

<u>Question</u>	<u>Wilks'</u> <u>Lambda</u>	<u>Sig.</u>
1. How satisfied do you feel with your chances for getting ahead in the Navy in the future? (Question 56)	0.845	0.0001
2. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks? (Question 7)	0.802	0.0001
3. Do you regard your duties in this command as helping your career? (Question 58)	0.783	0.01
4. To what extent do you understand your personal role as a representative of the U.S. when overseas? (Question 85)	.772	0.01
5. All in all, how satisfied are you with this command? (Question 53)	.765	0.01

The reader should note that the questions chosen by the discriminant analysis in Table 5 are identical, except for a slight shift in rank ordering, to those questions identified in the preceeding multiple regression analysis.

The means and standard deviations for the five most important questions in the discriminant analysis by stated intent to reenlist are provided in Table 6:

Table 6
MEANS AND STANDARD DEVIATIONS FOR TOP
FIVE SURVEY QUESTIONS IN THE
DISCRIMINANT ANALYSIS BY STATED INTENT
TO REENLIST

<u>Questions</u>	<u>Stated Reenlistment Intentions</u>			<u>F-Ratio</u>
	<u>Remain</u>	<u>Undec.</u>	<u>Leave</u>	
	<u>n=4605</u>	<u>n=3359</u>	<u>n=8715</u>	
1. Satisfaction with chances to get ahead (Ques 56)	3.68 (1.24)	3.26 (1.27)	2.44 (1.32)	1456.6
2. Motivated to contribute (Ques 7)	3.55 (1.09)	3.26 (1.11)	2.61 1.19)	925.42
3. Current duties help career (Ques 58)	3.36 (1.26)	2.86 (1.26)	2.30 (1.24)	689.11
4. Understand overseas role (Ques 85)	4.19 (0.99)	3.82 (1.12)	3.49 1.27)	549.73
5. Satisfied with command (Ques 53)	3.12 (1.28)	2.84 (1.24)	2.17 (1.19)	455.56

NOTE: A complete listing of means and standard deviations for the survey questions entering the discriminant analysis is provided in Appendix J.

Examination of the means associated with the top five survey questions in the discriminate analysis by stated intent to reenlist discerns a consistent relationship. Without exception, those individuals whose stated intention was to reenlist had higher mean scores in the questions studied than did those individuals who were either undecided or intended to leave the Navy. Furthermore, the undecided group consistently scored higher mean scores than did the group leaving the service.

The survey questions which were found to discriminate career intent measured individual levels of job satisfaction, future expectations, motivation, and personal roles overseas. In each of these areas, one would expect to find higher levels of satisfaction, interest, motivation, and personal concern from those individuals who have chosen to remain in the Navy environment (where these qualities are valued and around which the reward systems have been based) than in those individuals who intend to leave the service.

b. Prediction Results

The discriminant analysis derived three separate classification functions in which stated intent to reenlist was considered the dependent variable and the survey questions served as independent variables. On the basis of subjects' responses to the survey questions, individuals were classified as belonging in one of the three stated intent groups to which they most closely resembled. This classification was in turn compared with the actual classification to determine if the prediction was "correct" in the discriminant analysis.

Thus, if a particular respondent, whose stated

intent was to reenlist, responded to the survey questions in a pattern similar to the "will reenlist" group, he would be considered "correctly" classified. However, if his responses to the survey questions tended to resemble more closely the pattern associated with one of the other groups, he would be considered "incorrectly" classified.

Results of the predictions are given in Table 7. The percentage of cases which were correctly classified was 57.94%. This result indicates only a weak power to discriminate stated intent to reenlist using the survey questions.

Table 7
DISCRIMINANT ANALYSIS PREDICTION RESULTS

<u>Actual Group</u>	<u>No. of Cases</u>	<u>Predicted Group Membership</u>		
		<u>1</u>	<u>2</u>	<u>3</u>
Group 1	4605	2947	957	701
WILL		64.0%	20.8%	15.2%
Group 2	3359	1142	1180	1037
UNDECIDED		34.0%	35.1%	30.9%
Group 3	8715	1388	1791	5536
WON'T		15.9%	20.6%	63.5%
Ungrouped	188	81	44	63
Cases		43.1%	23.4%	33.5%
Percent of "Grouped" Cases Correctly Classified: 57.94%				

In general, the prediction results demonstrate only a weak ability to discriminate the three categories of stated intent to reenlist by using responses to the Human Resource Management Survey questions. However, examination

of Table 7 does suggest several comparative observations concerning the "correct" and "misclassified" cases in the matrix.

A. Will vs. Will Not Reenlist. When contrasting those individuals who will with those who will not reenlist, it is seen that less than one-fifth of the misclassifications occur between these two categories.

B. Will vs. Undecided. When contrasting those individuals who will reenlist with those individuals who are undecided about reenlistment, no discernable classification is possible between them. The high frequency of misclassifications indicates that these groups cannot be discriminated to the extent seen between the will and won't groups.

C. Won't vs. Undecided. Likewise, won't and undecided groups have a substantial cross-over in the predictions and cannot be discriminated to the extent seen between the will and won't groups.

c. Reenlistment Group Profiles

The means of the survey questions, when inspected by stated intent to reenlist permits the development of a general profile for each category. To facilitate comparative analysis between group profiles, and because the undecided group failed to evidence any discriminatory ability, only the will and won't group profiles are presented.

Table 8
PROFILES OF REENLISTMENT INTENTION
GROUPS

<u>Questions</u>	<u>Reenlistment Intention¹</u>	
	<u>Remain</u>	<u>Leave</u>
1. How satisfied do you feel with your chances for getting ahead in the Navy in the future? (Question 56)	Moderate	Low
2. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks? (Question 7)	Moderate	Low
3. Do you regard your duties in this command as helping your career? (Question 58)	Moderate	Low
4. To what extent do you understand your personal role as a representative of the U.S. when overseas? (Question 85)	High	Moderate

1 The mean scores for each question, for each intent group, were classified as either high, moderate, or low according to the following: "high" if question response mean > 3.75,

Table 8 (Continued)

5. All in all, how	Moderate	Low
satisfied are you		
with this command?		
(Question 53)		

Although the prediction results demonstrated a weak ability of the survey questions to discriminate an individual's stated intent to reenlist, the reenlistment intention profiles presented in Table 8 suggest that analysis of the survey response means does provide a method for discriminating reenlistment intention differences between those who intend to remain in the Navy and those who intend to leave.

As can be seen from Table 8, the mean score classification on the various survey responses for the individuals whose intention is to remain in the Navy is consistently higher than the respective mean score classification of those who intend to leave the Navy.

2. Testing of the Thesis Hypothesis

The hypothesis being tested in this section is whether or not units having either high or low retention rates develop "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other.

1 (Cont) "moderate" if $2.75 < \text{question response} < 3.75$,
and "low" if $\text{question response} < 2.75$.

Accordingly, the research sample was divided into high and low retention groups based on available unit retention data.¹ In dividing the research sample, only actual first and second term reenlistment rates were considered - as these retention rates were of primary interest in the study.² A unit's retention rate was classified as "high" if it exceeded 70% and, conversely, it was classified as "low" if it fell below 30%. Retention rates between these levels were considered "average". The high retention rate group was composed of those units whose first and second term retention rates showed at least one of the two to be high and the other either average or high. The low retention rate units were classified as those having either first or second term retention rates which were either low - low, low - average, or average - low, respectively. Units whose first and second term retention rates were contradictory (i.e. high-low or low-high, respectively) were not included in the sample. It was assumed by the researchers that units having contradictory

- - - - -

1 Actual unit retention data was obtained from Unit Type Commanders for the second quarter of fiscal year 1978 for each unit in the sample. Atlantic Fleet Type Commanders provided complete fiscal year 1978 summaries. Commander, Naval Surface Forces Pacific, provided an annual summary for each unit beginning in the second quarter of fiscal year 1977 (March 1977) and ending in the second quarter of fiscal year 1978 (March 1978). Commander, Naval Air Forces Pacific, retention summaries were from October 1977 through March 1978.

2 As noted in the introductory remarks, first and second term enlisted retention rates are of equal, and paramount, concern to the Navy. Accordingly, this thesis was specifically designed to focus on only first and second term retention rates. Career (third and fourth term) retention rates were purposefully omitted.

first and second term reenlistment rates would be representative of an "average" retention rate unit vice a "high" or "low" retention unit, as desired for this study. For the same reason, first and second term reenlistment rates were not independently analyzed as being either "high" or "low" and a profile developed for each of them. Contradictory first and second term "retention profiles" were assumed to be existent on only "average" retention rate units and these units were not included in the thesis. Therefore, first and second term retention rates were analyzed in the aggregate.

a. High Retention Unit Analysis

A stepwise discriminant analysis of the questions in the Human Resource Management Survey was performed with respect to an individual's stated intent to reenlist on those units designated as high retention units. The results of this analysis are summarized in Table 9. Of the eighty-eight questions in the survey, thirty-one failed to enter the analysis. Of the remaining fifty-seven questions, only the most significant questions are listed in Table 9.¹

- - - - -

1 The most significant questions listed in Table 9 contributed at least .01 to Wilks' lambda and had an F-ratio > 50.

Table 9
QUESTIONS ENTERING DISCRIMINANT ANALYSIS
BY STATED CAREER INTENT OF HIGH
RETENTION UNITS¹

<u>Question</u>	<u>Wilks'</u>	
	<u>Lambda</u>	<u>Sig.</u>
1. How satisfied do you feel with your chances for getting ahead in the Navy in the future? (Question 56)	0.852	0.000
2. Do you regard your duties in this command as helping your career? (Question 58)	0.783	0.000
3. To what extent does your command do a good job of meeting your needs as an individual? (Question 50)	0.787	0.01
4. To what extent do you understand your personal role as a representative of the U.S. when overseas? (Question 85)	.775	0.01

Table 9 Cont

5. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks? (Question 7)	0.765	0.01
6. To what extent has your work group been adequately trained to handle emergency situations? (Question 44)	0.753	0.01

- - - - -

1 A complete listing of the questions entering the discriminant analysis by stated career intent of high retention units is provided in Appendix K.

The results shown in Table 9 indicate a change in the six most important questions discriminated with respect to stated intent to reenlist. As can be seen, the most important question remains Question 56:

How satisfied do you feel with your chances for getting ahead in the Navy in the future?

Question 58 (do you regard your duties in this command as helping your career?), Question 85 (to what extent do you understand your personal role as a representative of the U.S. when overseas?), and Question 7 (to what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?) continued to remain among the most important questions. The importance of these questions with respect to stated intent to reenlist was previously examined during the regression analysis (pp. 63-65).

However, two questions not previously discussed showed statistical prominence in the analysis of high retention units:

1. To what extent does your command do a good job of meeting your needs as an individual? (Question 50).
2. To what extent has your work group been adequately trained to handle emergency situations? (Question 44).

Finally, Question 53 (all in all, how satisfied are you with this command?), which appeared statistically prominent (i.e. contributed at least .01 to Wilks' lambda and had an F-ratio > 50) in the analysis of the general sample, failed to retain that prominence in this analysis.

Discussion of the significance of these questions will be provided later.

The means and standard deviations for the six most important questions in the discriminant analysis of high retention units by stated intent to reenlist are provided in Table 10:¹

- - - - -
1 A complete listing of means and standard deviations in the discriminant analysis by stated intent to reenlist is provided in Appendix L.
- - - - -

Table 10
MEANS AND STANDARD DEVIATIONS FOR TOP
SIX SURVEY QUESTIONS IN THE DISCRIMINANT
ANALYSIS BY STATED INTENT TO REENLIST
AMONG HIGH RETENTION UNITS

<u>Questions</u>	<u>Stated Reenlistment Intentions</u>			
	<u>Remain</u>	<u>Undec.</u>	<u>Leave</u>	<u>F-Ratio</u>
	<u>n=944</u>	<u>n=654</u>	<u>n=1420</u>	
1. Satisfaction with chances to get ahead (Ques 56)	3.67 (1.24)	3.28 (1.25)	2.49 (1.31)	251.25
2. Current duties help career (Ques 58)	3.39 (1.27)	2.89 (1.27)	2.30 (1.24)	161.96
3. Cmd meets individual needs (Ques 50)	2.83 (1.13)	2.53 (1.11)	1.99 (1.03)	123.18
4. Understand overseas role (Ques 85)	4.17 (1.02)	3.80 (1.18)	3.52 (1.25)	98.55
5. Motivated to contribute (Ques 7)	3.56 (1.08)	3.31 (1.13)	2.68 (1.19)	83.17
6. Trained for emergency situations (Ques 44)	3.40 (1.12)	3.33 (1.13)	3.32 (1.19)	73.48

As shown in Table 10, examination of the means associated with the most important survey questions in the discriminate analysis of high retention units displays the same general relationship seen in the preceeding discriminant analysis. Individuals whose stated intention was to reenlist consistently displayed higher mean scores in the survey questions than did those who were undecided or intended to leave the service. Also, the undecided group had consistently higher scores than the group planning to leave the Navy. However, only slightly more than 20% of the variance of stated intent to reenlist is accounted for by the questions listed in Table 10.

The inclusion of two previously less-significant questions and the elimination of one previously important question from the analysis is noteworthy. Question 53 (all in all, how satisfied are you with this command?) did not retain statistical prominence in this analysis. It appears that measuring general satisfaction with the command was not as important in the case of high retention units as it was for the general sample. Instead, Question 50 (to what extent does your command do a good job of meeting your needs as an individual?) became a significant discriminating variable with respect to stated intent. Question 50 is part of the Goal Integration Index, which was designed to measure the command's effectiveness in getting people to meet the command's objectives as well as the command's effectiveness in meeting the individual's needs. It seems that Question 50, which is more specific in identifying an area of personal dissatisfaction (i.e. meeting individual needs) is better able to discriminate stated intent to reenlist than Question 53, which identifies only a general level of satisfaction response.

The second question gaining statistical

prominence in the discriminant analysis of high retention units, but not for the general sample, was Question 44 (to what extent has your work group been adequately trained to handle emergency situations?). This question is part of the Work Readiness Index which is designed to measure the extent to which the work group is able to adapt to emergency situations and meet its mission.

Prediction results of the discriminant analysis of high retention units are provided in Table 11:

Table 11
DISCRIMINANT ANALYSIS PREDICTION RESULTS
OF HIGH RETENTION UNITS

<u>Actual Group</u>	<u>No. of Cases</u>	<u>Predicted Group Membership</u>		
		<u>1</u>	<u>2</u>	<u>3</u>
Group 1	944	619	189	136
Will		65.6%	20.0%	14.4%
Group 2	654	220	259	175
Undecided		33.6%	39.6%	26.8%
Group 3	1420	205	285	930
Won't		14.4%	20.1%	65.5%
Ungrouped	36	10	12	14
Cases		27.8%	33.3%	38.9%
Percent of "Grouped" cases correctly classified: 59.91%				

Results of the predictive strength of the use of survey questions in discriminating stated intent to reenlist, shown in Table 11, indicates the percentage of cases correctly classified was 59.91%. This shows an improved, but still weak power of the survey questions to discriminate stated intent to reenlist.

Comparative analysis of the "correct" and "misclassified" cases in Table 11 suggests the following:

A. Will vs. Will Not Reenlist. When contrasting these opposing groups, it can be seen that correct placement of individuals occurs at a ratio of 5-to-1 over incorrect placement. These results represent only a slight improvement (1.5%) over the preceding discriminant analysis.

B. Will vs. Undecided. As shown in Table 11, the ratio of individuals correctly placed in the will group vs. the undecided group is slightly better than 3-to-1. There was no improvement in classification ability from the preceding discriminant analysis.

C. Won't vs. Undecided. No discernable classification is possible between these two groups. Their question response patterns are so alike that they are not able to be easily differentiated.

b. High Retention Unit Profile

The development of general profiles of high retention rate units is presented in Table 12. Again, due to the mitigating effect of the undecided group, only the leave and remain groups are presented.

Table 12
PROFILES OF REENLISTMENT INTENTION
GRUUPS IN HIGH RETENTION UNITS

<u>Questions</u>	<u>Reenlistment Groups¹</u>	
	<u>Remain</u>	<u>Leave</u>
1. How satisfied do you feel with your chances for getting ahead in the Navy in the future? (Question 56)	Moderate	Low
2. Do you regard your duties in this command as helping your career? (Question 58)	Moderate	Low
3. To what extent does your command do a good job of meeting your needs as an individual? (Question 50)	Moderate	Low
4. To what extent do you understand your personal role as a representative of the U.S. when overseas? (Question 85)	High	Moderate

Table 12 Cont

5. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks? (Question 7)	Moderate	Low
6. To what extent has your work group been adequately trained to handle emergency situations? (Question 44)	Moderate	Moderate

1 The means for each question for each intent group were classified as either high, moderate, or low according to the following: "high" if question response mean > 3.75, "moderate" if $2.75 < \text{question response} < 3.75$, and "low" if question response < 2.75.

As in the previous analysis, the predictive ability of the survey questions to discriminate stated intent to reenlist was not exceptionally strong. However, the reenlistment intention profiles presented in Table 12 show that analysis of the survey response means does provide a method for discriminating reenlistment intention differences between those who intend to remain in the Navy and those who intend to leave. Also consistent with the results obtained with the general sample was the trend for those individuals whose stated intention was to remain in the Navy to maintain consistently higher scores, on each of the various questions, than those who intended to leave.

c. Low Retention Unit Analysis

A stepwise discriminant analysis of the questions in the Human Resource Management Survey was performed with respect to an individual's stated intent to reenlist on those units designated as "low retention" units. The results of this analysis are summarized in Table 13. Of the eighty-eight questions in the survey, thirty-seven failed to enter the analysis. Of the remaining fifty - one questions, only the most significant¹ questions are listed in Table 13.

1 The most significant questions listed in Table 13 contributed at least .01 to Wilks' lambda and had an F-ratio > 50.

Table 13
QUESTIONS ENTERING DISCRIMINANT ANALYSIS
BY STATED CAREER INTENT OF LOW RETENTION
UNITS¹

<u>Question</u>	<u>Wilks'</u>	
	<u>Lambda</u>	<u>Sig.</u>
1. How satisfied do you feel with your chances for getting ahead in the Navy in the future? (Question 56)	0.864	0.0001
2. Do you regard your duties in this command as helping your career? (Question 58)	0.821	0.0001
3. To what extent do you understand your personal role as a representative of the U.S. when overseas? (Question 85)	0.799	0.01
4. To what extent does your command do a good job of meeting your needs as an individual? (Question 50)	0.786	0.01

1 A complete listing of the questions entering the discriminant analysis of low retention units on stated intent to reenlist is provided in Appendix M.

The results of the discriminant analysis of low retention units indicate only a small change in the discriminated questions. For low retention units, as for the high retention units, Question 56 (how satisfied do you feel with your chances for getting ahead in the Navy in the future?) and Question 58 (do you regard your duties in this command as helping your career?) remain the most important questions, respectively. For the low retention units, Question 50 (to what extent does your command do a good job of meeting your needs as an individual?) and Question 85 (to what extent do you understand your personal role as a representative of the U.S. when overseas?) are reversed in importance when compared to the high retention units. Further, Question 7 (to what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?) did not retain sufficient statistical prominence to be included in this analysis.

The significance of these differences will be discussed later.

The means and standard deviations for the above questions in the discriminant analysis of low retention units by stated intent to reenlist are provided in Table 14.

Table 14
MEANS AND STANDARD DEVIATIONS FOR TOP
FOUR SURVEY QUESTIONS IN THE
DISCRIMINANT ANALYSIS BY STATED INTENT
TO REENLIST AMONG LOW RETENTION UNITS

<u>Questions</u>	<u>Stated Reenlistment Intentions</u>			
	<u>Remain</u>	<u>Undec.</u>	<u>Leave</u>	<u>F-Ratio</u>
	<u>n=947</u>	<u>n=670</u>	<u>n=1868</u>	
1. Satisfaction with chances to get ahead (Ques 56)	3.65 (1.28)	3.26 (1.21)	2.50 (1.32)	256.68
2. Current duties help career (Ques 58)	3.36 (1.26)	2.77 (1.21)	2.31 (1.23)	168.78
3. Understand overseas role (Ques 85)	4.22 (0.95)	3.85 (1.12)	3.49 (1.26)	128.26
4. Cmd meets individual needs (Ques 50)	2.77 (1.13)	2.48 (1.06)	1.98 (1.04)	103.77

NOTE: A complete listing of the means and standard
deviations for all questions entering the discrimination
analysis for low retention units is provided in Appendix N.

AD-A072 573

NAVAL POSTGRADUATE SCHOOL MONTEREY CA
AN EVALUATION OF THE EFFECTIVENESS OF THE NAVY'S HUMAN RESOURCE--ETC(U)
JUN 79 J R ALMONY, J D REECE

F/G 5/1

UNCLASSIFIED

NL

2 OF 3

AD
A072573



2 of 3 AD A072573												
					</							

Results of the discriminant analysis of low retention units shown in Table 14 display the same general relationship discussed in the analysis of high retention units: that the mean scores for individuals whose stated intent is to remain in the Navy is consistently higher than those whose stated intent is either undecided or planning to leave the Navy. Further, the mean scores for the undecided group is consistently higher than the mean scores for those individuals who intend to leave.

With the exception of Question 7 (to what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?) which dropped out of the analysis due to decreased statistical prominence, the remaining four questions are the same as those appearing in the high retention unit analysis. The rank ordering of the questions, however, has changed.

Although Question 56 (how satisfied do you feel with your chances for getting ahead in the Navy in the future?) and Question 58 (do you regard your duties in this command as helping your career?) retain their positions as first and second most important, respectively, Question 85 (to what extent do you understand your personal role as a representative of the U.S. when overseas?) and Question 50 (to what extent does your command do a good job of meeting your needs as an individual?) are reversed in importance for the low retention units. Additionally, each of the mean scores on the questions listed in Table 14 are consistently lower than their comparable mean score for high retention units (Table 10).

The predictive ability of the survey questions to discriminate stated intent to reenlist for low retention units is provided in Table 15.

Table 15
DISCRIMINANT ANALYSIS PREDICTION RESULTS
OF LOW RETENTION UNITS

<u>Actual Group</u>	<u>No. of Cases</u>	<u>Predicted Group Membership</u>		
		<u>1</u>	<u>2</u>	<u>3</u>
Group 1	947	595	195	157
Will		62.8%	20.6%	16.6%
Group 2	670	211	281	178
Undecided		31.5%	41.9%	26.6%
Group 3	1868	308	424	1136
Won't		16.5%	22.7%	60.8%
Ungrouped	32	12	6	14
Cases		37.5%	18.8%	43.8%
Percent of "Grouped" Cases Correctly Classified: 57.73%				

Results of the predictive capability of the survey questions to discriminate stated intent to reenlist was only 57.73% for low retention units. This shows a very slight decrease in discrimination predictability of the survey questions on stated intent to reenlist when compared to both high retention units and the general sample. It appears that the increased mitigating effect of the undecided group in low retention units slightly decreases the survey's ability to differentiate between the respondents.

Comparative analysis of the "correct" and "misclassified" cases in Table 15 suggest the same results as found in the two previous analyses: the greatest discernable difference between groups exist between the will

and will not groups while the undecided group cannot be effectively differentiated from either of the two.

d. Low Retention Unit Profile

The development of a general profile of low retention rate units is presented in Table 16. Again, due to the mitigating effect of the undecided group in the analysis, only the will and won't reenlist groups are presented.

Table 16
PROFILES OF REENLISTMENT INTENTION
GROUPS IN LOW RETENTION UNITS¹

<u>Questions</u>	<u>Reenlistment Groups</u>	
	<u>Remain</u>	<u>Leave</u>
1. How satisfied do you feel with your chances for getting ahead in the Navy in the future? (Question 56)	Moderate	Low
2. Do you regard your duties in this command as helping your career? (Question 58)	Moderate	Low
3. To what extent do you understand your personal role as a representative of the U.S. when overseas? (Question 85)	High	Moderate
4. To what extent does your command do a good job of meeting your needs as an individual? (Question 50)	Moderate	Low

1 The means for each question for each intent group were classified as either high, moderate, or low according to the following: "high" if question response mean > 3.75,

The reenlistment intention profile presented in Table 16, with the exception of rank ordering of the questions, is identical with the retention profile for high retention units. Additionally, analysis of the mean scores on the various survey responses for the individuals who intend to remain in the Navy shows them to be consistently higher, respectively, than the mean scores for those who intend to leave the service. Further discussion of the value of this consistent finding will be presented later.

- - - - -

(cont) "moderate" if $2.75 < \text{question response} < 3.75$, and "low" if question response < 2.75 .

V. DISCUSSION

The preceeding discriminant analyses were performed to test the thesis hypothesis that units having high and low retention rates, respectively, would exhibit "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other. Further, it was theorized that these "retention profiles" would be useful to unit commanders by assisting them in the development of effective retention management strategies. It was the authors' intention, should the Human Resource Management Survey provide the hypothesized "retention profiles", to suggest possible uses of them to assist unit commanders in developing future retention management strategies.

The preceeding analyses highlighted the many facets, both personal and institutional, that affect the retention decision. The inability of job satisfaction alone, as a variable, to account for a significant amount of the variance in the retention decision was confirmed in the regression analysis. Additionally, no other variable, or even groups of variables, was found to explain the varying reasons an individual has for either remaining with, or leaving, his job. The fact that job satisfaction did not significantly affect stated intent to reenlist was also seen in the generally low mean scores of those individuals intending to remain in the Navy.

In originally designing this study, it was the authors' intention to utilize key dimensions and indicies currently described in the survey for establishing the various unit

"retention profiles". However, as noted in the regression analysis, the currently defined survey dimensions and indices had little effect and provided little descriptive power in the analysis. It appears that the current division of survey questions into dimensions and indices does not provide additional strength or clarity to the survey as an evaluative instrument for this study. Therefore, as a corollary to this thesis, a factor analysis of the survey questions was performed. The results of this analysis show the emergence of five major factors. These five factors account for 45.1% of the variance of the survey questions, while the remaining 83 factors, individually, contributed less than 2.2% to the total variance accounted for in the factor analysis (Appendix C). As previously stated, the clustering of the survey questions with respect to these five factors does not support the structuring of the five survey dimensions currently in use. Questions identified by the factor analysis clustered into four major groups of two to five questions plus seven additional groups having a small number of scattered questions. Additional investigation in this area is recommended. A summary of the factor analysis results is provided in Appendices D - G.

In the discriminant analyses, survey responses to various questions were shown to only weakly discriminate stated intent to reenlist. Nonetheless, the analysis did show that analysis of survey response means does provide a method for discriminating reenlistment intention differences between those who intend to remain in the Navy and those who intend to leave. Additionally, the discriminant analyses provided two important outcomes:

1. The change in the discriminated questions when the analysis was directed away from the general sample and applied only to the high and low retention units.

2. The consistent trend noted in survey responses between high and low retention units.

Throughout the analyses, Question 56 (how satisfied do you feel with your chances for getting ahead in the Navy in the future?) was found to be the most important question. Of the approximately 25% total variance accounted for in this analysis, Question 56 accounts for 14% of that total. Closer examination of this question provides some insight into its importance. As structured, the question asks the respondent to simultaneously describe his attitude about his current level of satisfaction (how satisfied do you feel...), evaluate future prospects (how satisfied do you feel with your chances for getting ahead...), limit the scope of his evaluation of future prospects to the Navy (how satisfied do you feel with your chances for getting ahead in the Navy...), and finally, to guess about the future Navy and then evaluate his chances in it (how satisfied do you feel with your chances of getting ahead in the Navy in the future?). Needless to say, the scope of this question does provide a good basis for developing one's future reenlistment intention. Unfortunately, for the researcher, interpretation of the many facets of this question are, at best, difficult. Its usefulness in identifying key elements associated with the development of the retention decision is questionable. No attempt is made here to interpret the significance of this question's ability to discriminate stated intent to reenlist.

It should be noted, however, that for Question 56, the response mean scores for those individuals planning to remain in the Navy, in all three discriminant analyses performed, was at least 1.15 points higher than the mean score for those planning to leave the Navy. It appears, then, that irrespective of the specific breakdown of the many facets of this question, those individuals who intend

to remain in the Navy tend to score higher on this question than those who intend to leave.

Question 58 (do you regard your duties in this command as helping your career?) was also found to be an important question in this analysis and added 4% to the 25% total variance accounted for in this study. As in the previous question, the mean scores for those who intend to remain in the Navy was consistently higher (at least 1.05 points) than the mean scores of those individuals who intended to leave. This result would indicate that those whose stated intent was to remain in the service would evaluate their current duties more favorably as helping their careers. However, it cannot be determined whether this evaluation leads to the development of one's retention decision (i.e. is causal) or is a result of the decision already having been made (i.e. reflective). Like Question 56, the structure of Question 58 does not lend itself to precise determination of the meaning of the results obtained.

In the discriminant analysis of the general sample, Question 53 (all in all, how satisfied are you with this command?) was shown to have statistical prominence (i.e. contributed at least .01 to Wilks' lambda and had an F-ratio > 50). However, after the general sample was divided into high and low retention units, Question 53 no longer remained statistically prominent. Instead, Question 50 (to what extent does your command do a good job of meeting your needs as an individual?) superseded Question 53 for the high and low retention units. This change in the discriminated questions when the analysis was directed away from the general sample and applied only to the high and low retention units is one of the important outcomes found during this study. The general structure of Question 53 does not identify the specific climate variables affecting an individual's stated intent to reenlist. Thus, when the

analysis shifted its focus to determine differences between high and low retention units, Question 50, vice Question 53, gained statistical prominence. Accordingly, it appears that the ability of the command to meet individual needs is both highly important and strongly related to the retention decision.

The emergence of Question 85 (to what extent do you understand your personal role as a representative of the U.S. when overseas?) as a discriminating variable for stated intent to reenlist is unexplained. It was originally believed that the reason this question was found to be an important variable was due to its correlation to the dependent variable (stated intent). A subsequent correlation analysis between these variables found only a weak, negative relationship ($r = -.26068$) to exist between them. The mean score differences for those who intend to remain in the Navy and those who intend to leave, for this question, were only approximately .70, less than noted previously. Thus, the apparent strength of question 85 in the discriminant function is deserving of future study.

Throughout the discriminant analyses, a consistent trend of survey question responses emerged. Specifically, those whose stated intent was to remain in the Navy consistently had higher mean scores than those individuals who were undecided. Further, the undecided group, in turn, had higher mean scores than did those who were intending to leave the service.

The development of "retention profiles" from the mean scores of survey responses showed no differences (except perhaps in relative mean score values) between high and low retention units. Thus, it appears that the development of "retention profiles", as originally envisioned, cannot be accomplished through use of the Human Resource Management

Survey. Accordingly, the thesis hypothesis must be rejected. It appears that units having either high or low retention rates do not exhibit "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other.

Although the discriminant analyses showed only a weak ability of the survey question responses to discriminate stated intent to reenlist, it was found that analysis of the mean scores of survey responses of various questions in the survey did produce useful information. This information can be utilized to assist unit commanders in developing retention management decisions and strategies. The first step in utilizing the Human Resource Management Survey responses as a retention management tool is to develop the command's typology of stated intent to reenlist in the Navy.

A. A TYPOLOGY OF STATED INTENTION TO REENLIST IN THE NAVY

The multiple aspects of the nature of the reenlistment decision (as noted in the previous section), when compared with questions in the Human Resource Management Survey, suggest that it may be useful to view the retention decision as a typology having three reenlistment decision groupings: (1) those who will reenlist, (2) those who are undecided about reenlisting, and (3) those who definitely will not reenlist. Further, each of these groups, when compared to specific questions in the survey, allows for the division of organizational members into nine categories:

1. A group of individuals whose stated intent is to remain in the organization and who have responded "positively" (i.e. either 4 or 5 on the Likert scale of

survey responses) with respect to a given question.

2. A group of individuals whose stated intent is "undecided" with respect to remaining with the organization but who, nonetheless, have responded positively with respect to a given question.

3. A group of individuals whose stated intent is to leave the organization but, nonetheless, have responded positively to a specific question.

4. A group of individuals whose stated intent is to remain in the organization but have responded "non-committally" (i.e. a response of 3 on the survey) to a given survey question.

5. A group of individuals whose stated intent is "undecided" with respect to remaining in the organization and who have answered "nonmmittally" to a given survey question.

6. A group of individuals whose stated intent is to leave the orgainzation and who have answered "non-committally" to a given survey question.

7. A group of individuals whose stated intent is to remain in the organization but have answered "negatively" (i.e., either 1 or 2 on the survey response) with respect to a given survey question.

8. A group of individuals whose stated intent is "undecided" with respect to remaining in the organization but who have responded "negatively" with respect to a given survey question.

9. A group of individuals whose stated intent is to leave the organization and who have answered "negatively" with respect to a given survey question.

Using the above typology, the population of unit commands can be differentiated and categorized into groups which would be of differential interest and attractiveness to command management. Intuitively, the group of individuals whose intent was to remain in the organization and who responded "positively" to given survey questions represent the most desirable organizational members for the Navy. Specifying which individuals, either those who are "undecided" about career intentions, or those who give positive responses to selected survey questions irrespective of stated career intent, should receive priority command retention efforts will likely depend on a number of organizational factors, e.g. costs of training and recruitment, variability of work load, etc.. Those individuals who intend to leave the organization and who answer "negatively" to survey questions probably represents the group of lowest value to most organizations. (Harris and Eoyanq, 1977).

Figure 2 illustrates the above typology.

Figure 2
CLASSIFICATION OF STATED INTENT TO
REENLIST

<u>Survey Response</u>			
<u>Intention</u>	<u>Positive</u>	<u>Non-Committal</u>	<u>Negative</u>
Remain	Group 1	Group 4	Group 7
Undecided	Group 2	Group 5	Group 8
Leave	Group 3	Group 6	Group 9

Differentiating unit personnel into the reenlistment categories listed in Figure 2 allows command retention management personnel to determine the antecedents to and consequences of various strategies on the varying reenlistment intention groups within the command. Having assessed the probable effects of differing strategies on the various population subgroups, unit commands can then begin to develop and expand those strategies which are most appropriate for each of the reenlistment intention groups. These strategies will have their basis in the Human Resource Management Survey responses of the command.

Utilizing the questions listed in Table 10, as a minimum, unit retention managers can begin to analyze the unit's Human Resource Management Survey responses.¹

¹ Mean scores in any group breakdown the command desires can be obtained through the assistance of the Human Resource Management Center team that conducts a unit's normal Human Resources Availability (HRAV).

To assist the reader in understanding the specific processes involved in the above procedure, an example will be provided. The unit in the example was chosen from the available research sample. It was a fleet unit of moderate size (n=531) having a "high" actual retention rate for FY 1978. For purposes of this discussion, the sample unit will be referred to as the USS Barnacle.

Although each of the questions listed in Table 10 were analyzed and subdivided into the reenlistment intention groups applicable to USS Barnacle, only one of the questions will be presented for illustrative purposes. The question to be considered in this example is Question 50: to what extent does this command meet your needs as an individual?. The reenlistment intention breakdown of response mean scores was as follows:

Table 17
EXAMPLE: USS BARNACLE RESPONSE ON
QUESTION 50: TO WHAT EXTENT DOES THIS
COMMAND MEET YOUR NEEDS AS AN
INDIVIDUAL?

<u>Intent</u>		<u>Survey Responses¹</u>			<u>Row</u> <u>Total</u>
		<u>High</u>	<u>Med</u>	<u>Low</u>	
Will	Mean	4.27	3.00	1.55	
	(n)	52	59	40	151
	Tot Pct	9.8	11.1	7.5	28.4
		- - -	- - -	- - -	
Undecided	Mean	4.17	3.00	1.64	
	(n)	29	51	52	132
	Tot Pct	5.5	9.6	9.8	24.9
		- - -	- - -	- - -	
Won't	Mean	4.15	3.00	1.49	
	(n)	27	77	144	248
	Tot Pct	5.1	14.5	27.1	46.7
		- - -	- - -	- - -	
Column Tot	(n)	108	187	236	531
	Pct	20.3	35.2	44.4	100.0

1 Survey responses were grouped as "high" if the response score was either 4 or 5, "medium" if the survey response was 3, and "low" if the response was either 2 or 1.

Review of the row totals of Table 17 shows that 28.4% of USS Barnacle's respondents intend to reenlist (n=151), 24.9% are undecided about reenlistment, and 46.7% are intending to leave the service. This breakdown of the unit's population should provide the USS Barnacle's retention managers with a good indication of the command's future retention rate percentages.

Review of the column totals provides additional information specifically describing (in the perception of its crew) the ability of the command to meet individual needs. In the case of the USS Barnacle, 44.4% of the respondents (n=236) have indicated that the command does not do a good job in this area. In contrast, and without considering reenlistment intention, only 20.3% of the respondents perceive the command as effectively meeting individual needs. These statistics alone, even though USS Barnacle was previously noted as having a "high" actual retention rate, should be sufficiently alarming to the command because of its possible negative future impact on retention aboard the unit. But, to what extent should the command concern itself with individual needs? Is this survey response the result of a recent incident or does it reflect general feelings about the command? How much special command effort should be directed toward this problem, if any?

The above questions are rhetorically presented to further illustrate some of the questions that might be asked by the unit's retention management personnel when analyzing the question responses. Further breakdown of the possible strategies that may be adopted might include only attempting to concentrate corrective efforts on the "undecided" personnel who marked the command low in this area (Group 8). Alternately, efforts might be taken to address some larger segment of the unit (Groups 7 and 8, for example), or

perhaps the entire command. These decisions must be based on command priorities and operational considerations.

As we have seen, review of mean score responses and comparative analysis of survey responses after dividing the command population into the nine groups described earlier in the typology does provide useful information for unit commanders in developing retention management strategies and decisions. The extent to which the survey responses will provide useful information to the command is based, in part, on the extent to which the unit commander views his data as "valid". If the unit commander considers his data as accurately describing conditions aboard his command, he can be confident in making decisions based on the information provided. On the other hand, if the unit commander views the command data as less than accurate in describing command conditions and climate, its usefulness as a retention management tool will be limited accordingly.

"The Luck of the Draw" Phenomenon

It has been the feeling of several commanding officers, and expressed to the authors, that retention is really dependent on the "luck of the draw". More specifically, if a command receives a large number of people onboard for duty who are predisposed to reenlist, for whatever reason, then that ship will, not of its own own accord, be commended for its high retention rate. Conversely, the unit that receives predisposed "leavers", irrespective of the command's retention programs and policies, suffers from poor personnel retention. With such little control of the situation, these commanding officers express frustration and helplessness. It is the authors' opinion that the use of the typology and methodology for analyzing unit survey responses, vis a vis retention, presented in this thesis will allieviate some of the frustration caused by the "luck of the draw".

Utilization of the data provided in the survey responses should provide unit commanders with an improved indication of the population make-up of their commands with respect to stated intent to reenlist. Unit commanders faced with a large number of predisposed "leavers" can not only document that fact for his own uses, but also utilize the information contained within the survey responses to develop strategies and make retention management decisions which might tend to minimize the non-positive effect of these "leavers" on the command's undecided and career personnel. Additionally, units with a large number of "stayers" can attempt, by use of the information available in the survey responses, to develop strategies which would even further support retention management efforts as well as improve command climate and overall effectiveness.

VI. CONCLUSION

The issue of Navy enlisted retention management is an important and real problem facing the navy today. The difficulty of developing effective retention management strategies and decisions is, as shown in this study, largely due to the complexity of the retention problem itself.

As shown in the regression analysis performed in the earlier part of this thesis, the Human Resource Management Survey accounts for only about 25% of the variance in stated intent to reenlist. This finding was shown to be consistent with other research findings identified in the literature review.

The hypothesis that was tested in this thesis was that units having either high or low retention rates develop "retention profiles" - as defined by mean scores on key questions in the Human Resource Management Survey - which are significantly different from each other. Discriminant analyses of the survey responses for high and low retention units showed only a weak ability of the survey responses to discriminate stated intent to reenlist. Further, the "retention profiles" developed from the survey responses were essentially the same for both high and low retention units and therefore not practically useful. Thus, the thesis hypothesis is rejected.

Although the discriminant analyses showed only a weak ability of the survey to discriminate stated intent to reenlist, it was found that analysis of the mean scores of survey responses of various questions in the survey did

produce useful retention management information. A typology was developed and a methodology presented for utilizing the available survey data in developing retention management strategies and decisions.

The value in utilizing the command's Human Resource Management Survey responses in developing its retention management strategies lies in the fact that, currently, no structured approach toward retention management exists for unit commanders. Often, retention strategies are generally applied, shotgun-style, in the hopes that some improvement will take place. Taking nothing away from the dedicated efforts of retention managers in the fleet, the authors' submit that use of the Human Resource Management Survey responses provide a sound, structured basis upon which to build future command efforts in the area of personnel retention.

Concerning recommendations for future research, the following areas are suggested:

1. Conduct a detailed factor analysis of the Human Resource Management Survey to validate the currently defined survey dimensions and indices. As discussed in the regression analysis, the survey dimensions and indices proved to be of little consequence in the analyses performed for this thesis. The usefulness of the designated dimensions and indices for measuring the areas they were designed to measure is doubtful. The limited factor analysis performed in the thesis does not support the currently defined dimensions and indices.

2. The problem of personnel retention is of paramount importance to the Navy today and will remain so for the Navy in the future. As an alternative to conducting numerous, independently designed, future studies to evaluate Navy

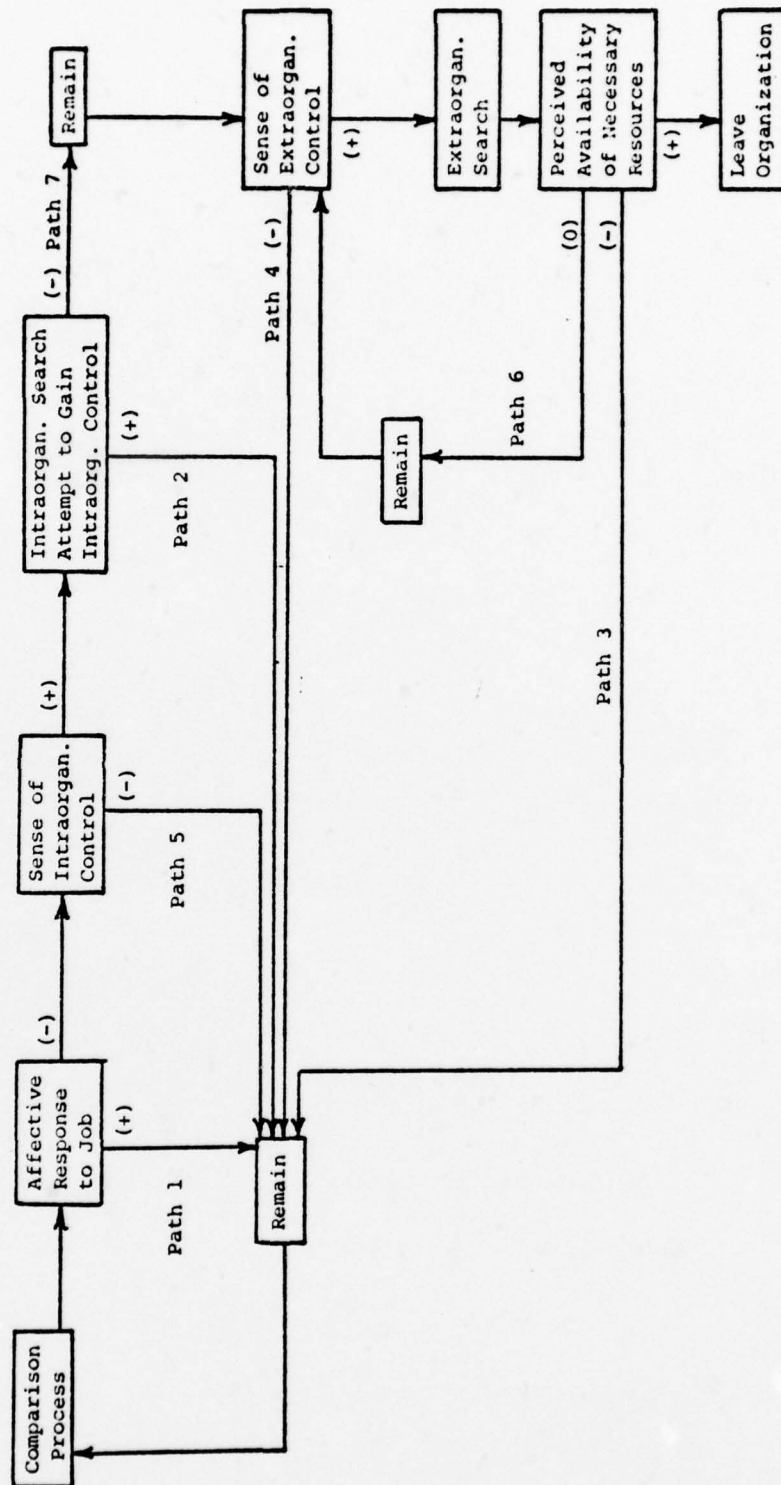
retention, it is recommended that a "retention index" be developed and included in the standard Human Resource Management Survey. Using the results of the discriminant analyses in this thesis as a guide, it is recommended that a "retention index" be developed to meet the needs of Navy manpower managers. Currently, only the individual's stated intent to reenlist (demographic variable 14) addresses the retention problem. No survey question is directed toward assessment of Navy retention matters.

3. The emphasis in this thesis was to identify "retention profiles" in high and low retention units by aggregating first and second term reenlistment personnel. In retrospect, it is unknown whether separate analysis of first and second term reenlistment groups would have satisfactorily developed the desired "retention profiles". Therefore, it is recommended that the processes utilized in this analysis be repeated and attempts to gain distinct "retention profiles" for high and low retention units be tried by separate analysis of first and second term reenlistment groups.

4. In order to develop the strategies necessary for effective management of Navy enlisted retention, a means of conceptualizing the relationships between an individual's intention to remain in the organization and the alternatives available to him must be understood. Atkin and Ball (1978) have developed a model describing the relationships between an individual's intention to remain in the organization and the possible alternatives he may have open to him. The model has its basis in social comparison theory developed by Goodman (1977).

Figure 3

A Model of the Decision to Leave
or Remain With an Organization



In general, the "starting point" in the model is any stimulus or event which causes an individual to search for additional information. This stimulus can develop from any source or circumstance. Further, the resultant search for additional information by the individual can be both internal (i.e. memory) or external (i.e. asking questions) to the individual. Once the individual begins to search for additional information, social comparison theory assumes that the individual will then compare the information that has been gathered against a personal set of standards or referents. This process, in turn, is then assumed to produce an affective response within the individual which may subsequently predispose him toward a given behavior. What that behavior is and whether or not it is enacted, specifically in the area of job turnover, constitutes the primary focus of the Atkin and Ball (1978) model.

Although the individual may or may not have any control over the event that initiated the comparative process, it is assumed that he does have some control over his reactions to the information (Atkin and Ball, 1978; Goodman, 1977). In addition to being dependent on the degree of personal value fulfillment and the absolute value of the outcome, the action taken by the individual also depends on whether a positive or negative affective response is experienced. In the present context, the question becomes, then, which of these behavioral responses results in a decision to stay or to leave. In other words, if the emotional reaction is favorable, we assume that the employee remains as a relatively contented employee (Figure 3, Path 2) (Atkin and Ball, 1978).

In the model, Atkin and Ball (1978) postulate that sense of control by the individual has at least two components—one of intraorganizational control and the other of

extraorganizational control. The information used in establishing a sense of control is dependent both on past experiences (memory) and anticipated future outcomes. If one has a high sense of intraorganizational control, he perceives a relatively high expectancy that his actions will lead to contingent, desired outcomes within the organization. The analogy pertaining to a high sense of extraorganizational control is similar.

Atkin and Ball (1978) further hypothesize that an individual will seek to gain control of intraorganizational outcomes before seeking extraorganizational alternatives. Success in gaining intraorganizational control provides a strong tendency to remain in the organization (Figure 3, Path 2). If the individual perceives he has little chance to affect intraorganizational outcomes, he may remain in the organization, but as a "helpless" employee (Figure 3, Path 5). However, "becoming helpless" is a learned state, and it takes many iterations through the process for an employee to reach such a state.

Failure to control intraorganizational outcomes may result in the individual initiating an extraorganizational search. Those individuals who failed in their attempt to gain intraorganizational control and who do not possess a high sense of achieving extraorganizational control will most likely remain with the employing unit (Figure 3, Path 4). Although Atkin and Ball (1978) argued that many iterations would be required to reduce the individual's sense of intraorganizational control, they hypothesize that it would take fewer iterations for an employee to conclude that he has little probability of success at gaining extraorganizational alternatives (or that his alternatives are no better than his present job).

It should be noted that neither Path 4 or Path 5

"remainders" would be expected to "be happy" with their lot, and in particular we would expect them to report lower job satisfaction in general than would the Path 1 and Path 2 employees. (Atkin and Ball, 1978).

If the employee, as a result of an extraorganizational search, sees either a low chance of attaining a valued extraorganizational alternative or does not perceive that a valued alternative exists regardless of the probability of attaining it, he can be expected to remain with the employer (Path 3). In other words, he has received sufficient signals from the environment that there may be resources available, but additional search and/or evaluation is required by him to confirm it. This strengthens his sense of extraorganizational control to the degree that he continues his search - remaining in a "recycle" loop.

Finally, the individuals on Paths 6 and 7 also remain in the organization. But, this is more from a need to "have something" while searching for new alternatives. These paths are generally temporary in that the resultant extraorganizational search will either uncover a viable alternative, and hence the individual will leave, or no viable alternative, and hence the individual would be expected to reduce his search activity and remain. Such activity, however, will ultimately affect job performance to the point where either the individual is forced to leave, or must curtail his search (Atkin and Ball, 1978).

The Atkin and Ball (1978) model presented above provides many paths for an employee to remain with an organization. As we have seen, each path results in an employee whose affective response to his job differs. And it is these differences that impact on an employee's future job behavior.

Thus, it is highly recommended that the Atkin and Ball (1978) model be tested for its applicability in the Navy setting. The potential usefulness of the information available in the model appears to be significant. Mobley, et al., (1977a) have suggested that a general lack of multivariate research designs and incomplete conceptual models of the turnover process has contributed to the inability to adequately interpret the role of organizational, work environment, and other factors in employee turnover. The Atkin and Ball (1978) model provides a potentially sound conceptual basis upon which to base future Navy retention research.

APPENDIX A

DESCRIPTION OF DIMENSIONS AND INDICES

I. COMMAND CLIMATE DIMENSION: (Questions 1 - 14)

Refers to the conditions, policies, and procedures within which a work group operates. These conditions and policies are created for a work group by other groups, especially by those groups above it in the command hierarchy. Climate conditions set bounds on what does and what does not go on within any group. Aspects of climate, as listed below can help or hinder groups, or do both at the same time.

1. COMMUNICATIONS FLOW INDEX (Questions 1 - 3)

Command leadership understands the work and problems of the command. Information flows freely through the chain of command, from the work groups to a listening and responsive leadership and to the work groups concerning plans and problems facing the command.

2. DECISION MAKING INDEX: (Question 4 - 6)

Information is widely shared within the command and decisions are made at those levels where the most adequate information is available. Supervisors seek out information before making decisions.

3. MOTIVATION INDEX: (Questions 7 - 9)

Through its practices and policies, the command provides motivating conditions for personnel to contribute their best efforts.

4. HUMAN RESOURCE EMPHASIS INDEX: (Questions 10-14)

The command shows concern for human resources in the way it organizes its personnel to achieve its mission. Personnel within the command perceive that the organization and assignment of work sensibly considers the human element.

II. SUPERVISORY LEADERSHIP DIMENSION: (Question 15-27)

Comprised of the behavior of the supervisor toward subordinates.

5. SUPPORT INDEX: (Questions 15 - 18)

Leaders behave in a way which increases the work group members' feelings of worth and dignity.

6. TEAM COORDINATION INDEX: (Questions 19 - 20)

Supervisors encourage subordinates to work out conflicts and exchange opinions and ideas within the work group.

7. TEAM EMPHASIS: (Questions 21 - 22)

Supervisors encourage subordinates to develop close, cooperative working relationships in order to reach a team goal.

8. GOAL EMPHASIS INDEX: (Questions 23 - 24)

High standards of performance are set, maintained, and encouraged by supervisors.

9. WORK FACILITATION INDEX: (Questions 25 - 27)

Supervisors help those subordinates and supervisors who work for them to improve performance. The work groups work together to solve problems which hinder performance and task completion.

III. PEER LEADERSHIP DIMENSION: (Questions 28 - 39)

Behavior of work group members toward each other.

10. SUPPORT INDEX: (Questions 28 -30)
Work group members behave toward each other in a manner which enhances each member's feeling of personal worth.
 11. TEAM COORDINATION INDEX: (Questions 31 -32)
Team members work out conflicts and exchange questions and ideas within the work group.
 12. TEAM EMPHASIS INDEX: (Questions 33 - 34)
Team members develop close, cooperative working relationships in order to reach a team goal.
 13. GOAL EMPHASIS INDEX: (Questions 35 - 36)
Team members set, maintain and encourage high standards of performance.
 14. WORK FACILITATION INDEX: (Questions 37-39)
Work group members help each other improve performance. The work group works together to solve problems which hinder performance and task completion.
- IV. WORK GROUP PROCESSES DIMENSION: (Questions 40-48)
Measures those things which characterize the group as a team and whether group members work together well or poorly. The way in which group members share information, make decisions, and solve problems determines the group's productiveness and the quality of its outputs.
15. WORK GROUP COORDINATION INDEX: (Questions 40-43)
Work group members plan, coordinate, and support each other effectively.
 16. WORK GROUP READINESS INDEX: (Questions 44-46)
The work group is able to adapt to emergency situations and meet its mission.
 17. WORK GROUP DISCIPLINE INDEX: (Questions 47-48)
Work group members maintain Navy standards of etiquette and discipline.

V. ADDITIONAL INDICES FOR EMPHASIS AND END RESULTS MEASURES:

18. GOAL INTEGRATION INDEX: (Questions 49-50)
The command is seen as effective in getting people to meet the command's objectives as well as meeting the individual's needs.
19. SATISFACTION INDEX: (Questions 51 - 58)
Personnel within the command are satisfied with their supervisors, the command, other work group members, their jobs, and their present and future progress in the Navy.
20. LOWER LEVEL INFLUENCE INDEX: (Questions 59-60)
Lowest level supervisors and non-supervisory personnel have the opportunity to influence what goes on in their departments.
21. TRAINING INDEX: (Questions 61 - 63)
Individuals have been trained in their assigned tasks. The development of technical and leadership skills and other facets of professional advancement are encouraged.
22. EQUAL OPPORTUNITY INDEX: (Questions 64-76)
The command ensures equal opportunity for all personnel in such areas as job assignment, education, rewards and punishment. There is an openness and willingness to address equal opportunity issues within the command. NOTE: It should be understood that in addition to these questions other dimensions, such as command climate, indicate the command's ability to effectively manage in order to achieve equal opportunity.

23. DRUG ABUSE AND ALCOHOLISM PREVENTION

INDEX: (Questions 77-84)

Personnel in the command have the ability and willingness to recognize and respond too drug abuse and alcohol problems in an effective and candid manner.

24. OVERSEAS DIPLOMACY MISSION ELEMENT INDEX:

(Questions 85-86)

Personnel are conscious of and concerned with their image overseas.

25. GENERAL INDEX: (Questions 87 -88)

The following questions provide useful data in and of themselves; however, they do not statistically group with other questions in the Navy Human Resource Management Survey.

APPENDIX E

THE HUMAN RESOURCE MANAGEMENT SURVEY (SEA)

I. Command Climate Dimension

1. Communications Flow Index

1. To what extent is the amount of information you get from other work groups adequate to meet your job requirements?
2. To what extent does this command do a good job of putting out the word to you?
3. To what extent is the chain of command receptive to your ideas and suggestions?

2. Decision Making Index

4. Decisions are made in this command at those levels where the most adequate information is available.
5. Information is widely shared in this command so that those who make decisions have access to available know-how.
6. When decisions are being made, to what extent are the people affected asked for their ideas?

3. Motivation Index

7. To what extent do you feel motivated to contribute your best efforts to the command's mission and tasks?
8. To what extent are there things about this command (people, policies or conditions) that encourage you to work hard?
9. To what extent do people who work hard receive recognition from the Command?

4. Human Resource Emphasis Index

10. To what extent does this command have a real interest in the welfare and morale of assigned personnel?
11. To what extent are work activities sensibly organized in this command?
12. This command has clear-cut, reasonable goals and objectives that contribute to its mission.
13. I feel that the workload and time factors are adequately considered in planning our work group assignments.
14. People at higher levels of the command are aware of the problems at your level.

II. Supervisory Leadership Dimension

5. Support Index

- 15. How friendly and easy to approach is your supervisor?
- 16. To what extent does your supervisor pay attention to what you say?
- 17. To what extent is your supervisor willing to listen to your problems?
- 18. When things are not going as well as your supervisor expects, to what extent is it easy to tell him/her?

6. Team Coordination Index

- 19. To what extent does your supervisor attempt to work out conflicts within your work group?
- 20. To what extent does your supervisor encourage the people in your work group to exchange opinions and ideas?

7. Team Emphasis Index

- 21. To what extent does your supervisor encourage the people in your work group to work as a team?

22. To what extent does your supervisor stress a team goal?

8. Goal Emphasis Index

23. To what extent does your supervisor encourage the members of your work group to give their best efforts?

24. To what extent does your supervisor expect high standards of performance from the members of your work group?

9. Work Facilitation Index

25. To what extent does your supervisor help you to improve your performance?

26. To what extent does your supervisor provide the assistance you need to plan, organize and schedule your work ahead of time?

27. To what extent does your supervisor offer you ideas to help solve job-related problems?

III. Peer Leadership Dimension

10. Support Index

28. How friendly and easy to approach are the members of your work group?

29. When you talk with the members of your work group, to what extent do they pay attention to what you are saying?

30. To what extent are the members of your work group willing to listen to your problems?

11. Team Coordination Index

31. To what extent do members of your work group take the responsibility for resolving disagreements and working out acceptable solutions?

32. To what extent do people in your work group exchange opinions and ideas?

12. Team Emphasis Index

33. How much do members of your work group encourage each other to work as a team?

34. How much do members in your work group stress a team goal?

13. Goal Emphasis Index

35. How much do people in your work group encourage each other to give their best effort?

36. To what extent do people in your work group maintain high standards of performance?

14. Work facilitation Index

37. To what extent do members in your work group help you find ways to improve your performance?

38. To what extent do members of your work group provide the assistance you need to plan, organize and schedule your work ahead of time?

39. To what extent do members of your work group offer each other ideas for solving job-related problems?

IV. Work Group Processes Dimension

15. Work Group Coordination Index

40. To what extent does your work group plan together and coordinate its efforts?

41. To what extent do you have confidence and trust in the members of your work group?

42. To what extent is information about important events widely exchanged within your work group?

43. To what extent does your work group make good decisions and solve problems effectively?

16. Work Group Readiness Index

44. To what extent has your work group been adequately trained to handle emergency situations?

45. To what extent does your work group perform effectively under pressure or in emergency situations?

46. To what extent can your work group effectively meet day to day mission requirements?

17. Work Group Discipline Index

47. To what extent do members of your work group maintain Navy standards of military courtesy, appearance and grooming?

48. To what extent are Navy standards of order and discipline maintained within your work group?

V. Additional Indices For Emphasis and End Results Measures

18. Goal Integration Index

49. To what extent is your command effective in getting you to meet its needs and contribute to its effectiveness?

50. To what extent does your command do a good job of meeting your needs as an individual?

19. Satisfaction Index

51. All in all, how satisfied are you with the people in your work group?

52. All in all, how satisfied are you with your supervisor?

53. All in all, how satisfied are you with this command?

54. All in all, how satisfied are you with your job?

55. All in all, how satisfied do you feel with the progress you have made in the Navy, up to now?

56. How satisfied do you feel with your chances for getting ahead in the Navy in the future?

57. Does your assigned work give you pride and feelings of self worth?

58. Do you regard your duties in this command as helping your career?

20. Lower Level Influence Index

59. To what extent do lowest level supervisors influence what goes on in your department?

60. To what extent do non-supervisory personnel influence what goes on in your department?

21. Training Index

61. To what extent is this command adequately training you to perform your assigned tasks?

62. To what extent is this command training you to accept increased leadership responsibility?

63. To what extent is this command training you to accept increased technical responsibility?

22. Equal Opportunity Index

64. To what extent do you feel free to report any racial/ethnic discrimination in this command through proper channels?

65. To what extent does this command ensure that you have equal opportunity for advancement in rate/rank?

67. To what extent do you feel free to report any sex discrimination in this command through proper channels?

68. To what extent does this command ensure that you have equal opportunity for education and training?

69. To what extent does this command ensure that you receive a fair and objective performance evaluation?

70. To what extent is your chain of command willing to take action on known or alleged racial/ethnic issues?

- 71. To what extent is military justice administered fairly throughout this command?
 - 72. To what extent are grievances and redress procedures available and well publicized in this command?
 - 73. In this command work assignments are fairly made.
 - 74. People in this command discourage favoritism.
 - 75. To what extent is your chain of command willing to take action on known or alleged sex discrimination issues?
 - 76. To what extent are current equal opportunity issues being addressed in this command's Affirmative Action Plan (AAP)?
23. Drug Abuse and Alcoholism Prevention Index
- 77. To what extent does this command have an effective drug abuse prevention program?
 - 78. To what extent do members of your work group discourage drug abuse?
 - 79. To what extent would you feel free to talk to your supervisor about a drug problem in your work group?

80. To what extent is the performance of your work group affected by drug and/or alcohol related problems?

81. To what extent would you feel free to talk to your supervisor about an alcohol problem in your work group?

82. To what extent does the command program promote the responsible use or the non-use of alcoholic beverages?

83. To what extent do members of your work group discourage the abuse of alcoholic beverages?

84. To what extent do the social activities of this command include alternatives to the use of alcohol?

24. Overseas Diplomacy Mission Element Index

85. To what extent do you understand your personal role as a representative of the U. S. when overseas?

86. To what extent do you look forward to visiting foreign countries?

25. General Index

87. To what extent has this command provided information to assist you and/or your family to live in this area?

88. To what extent are newly reported personnel quickly integrated into the activities and work of this command?

APPENDIX C

REGRESSION RESULTS OF INTENT ON INDICES

<u>Index</u>	<u>R-Square</u>
Index 19	.119
Index 3	.138
Index 25	.148
Index 11	.154
Index 16	.158
Index 20	.160
Index 12	.164
Index 9	.167
Index 23	.169
Index 15	.170
Index 18	.172
Index 21	.173
Index 26	.174
Index 1	.174
Index 10	.175
Index 7	.175
Index 2	.175
Index 22	.175
Index 24	.176
Index 17	.176
Index 14	.176
Index 6	.176
Index 8	.176
Index 4	.176
Index 5	.176
Index 13	.176

APPENDIX D

ABBREVIATED FACTOR ANALYSIS VARIANCE SUMMARY

<u>Factor</u>	<u>Eigen</u> <u>Value</u>	<u>Pct of</u> <u>Var</u>	<u>Cum</u> <u>Pct</u>
1	25.21	28.7	28.7
2	5.83	6.6	35.3
3	4.32	4.9	40.2
4	2.26	2.6	42.8
5	2.07	2.4	45.1
6	1.96	2.2	47.3
7	1.56	1.8	49.1
8	1.48	1.7	50.8
9	1.32	1.5	52.3
10	1.29	1.5	53.7
11	1.13	1.3	55.0
12	1.11	1.3	56.3
13	1.09	1.2	57.5
14	1.00	1.1	58.6
15	0.98	1.1	59.8
16	0.93	1.1	60.8
17	0.91	1.0	61.8
18	0.89	1.0	62.9
19	0.87	1.0	63.8
20	0.84	1.0	64.8
21-25	-	3.5	68.3

NOTE: Factors 21-25, individually, accounted for less than 1.0 percent of the variance.

APPENDIX E

ABBREVIATED FACTOR ANALYSIS MATRIX USING PRINCIPLE FACTOR, NO ITERATIONS

Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
15			-0.55		
16			-0.57		
17			-0.56		
19			-0.53		
25	0.64				
26	0.64				
29		-0.42			
31		-0.42			
32		-0.46			
35	0.63				
39		-0.42			
50	0.64				
52			-0.55		
53		0.43			
54					-0.40
55					-0.47
56					-0.35
58					-0.35
66	0.64				

67	0.45	
75	0.46	
79	0.34	
81	0.34	
82	0.32	
83		0.34

NOTE: The five most significant correlation coefficients
(factor weights) are presented for each factor.

APPENDIX F

ABBREVIATED VARIMAX ROTATED FACTOR MATRIX, 88 QUESTIONS LIMITED TO FIVE FACTORS

Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1		0.33			
2		0.52			
3		0.55			
4		0.55			
5		0.58			
6		0.61			
7		0.55			
8		0.63			
9		0.59			
10		0.65			
11		0.60			
12		0.54			
13		0.52			
14		0.49			
15			0.75		
16			0.78		
17			0.79		
18			0.71		
19			0.76		
20			0.71		
21			0.67		
22			0.64		
23			0.58		
24			0.31		
25			0.71		

Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
26			0.67		
27			0.68		
28	0.59				
29	0.67				
30	0.70				
31	0.72				
32	0.68				
33	0.72				
34	0.65				
35	0.65				
36	0.69				
37	0.67				
38	0.64				
39	0.73				
40	0.68				
41	0.71				
42	0.57				
43	0.67				
44	0.45				
45	0.53				
46	0.53				
47	0.42				
48	0.41				
49		0.42			
50		0.62			
51	0.64				
52			0.75		
53		0.63			
54					0.70
55					0.65
56					0.56
57					0.64
58					0.65
59		0.36			

Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
60		0.36			
61					0.46
62					0.50
63					0.53
64				0.59	
65				0.53	
66				0.49	
67				0.66	
68				0.47	
69				0.41	
70				0.63	
71				0.44	
72		0.50			
73		0.42			
74		0.41			
75				0.63	
76				0.54	
77				0.39	
78				0.28	
79			0.48		
80	-0.16				
81			0.49		
82				0.39	
83				0.28	
84		0.28			
85				0.15	
86		0.36			
87		0.36			
88				0.37	

NOTE: The most significant factor weights for each question across the five factors are presented.

APPENDIX G

ABBREVIATED VARIMAX ROTATED FACTOR MATRIX ON EXISTING SURVEY DIMENSIONS

Dimension 1

Question	Factor 1	Factor 2	Factor 3	Factor 4
Index 1				
1				0.94
2		0.64		
3	0.53			
Index 2				
4		0.73		
5		0.71		
6	0.52			
Index 3				
7	0.73			
8	0.76			
9	0.59			
Index 4				
10	0.61			
11			0.70	
12			0.62	
13			0.75	
14	0.49			

<u>Dimension 2</u>					
Question	Factor	Factor	Factor	Factor	Factor
	1	2	3	4	5
Index 5					
15	0.86				
16	0.79				
17	0.78				
18	0.63				
Index 6					
19				0.57	
20				0.61	
Index 7					
21		0.79			
22		0.83			
Index 8					
23		0.71			
24					0.95
Index 9					
25			0.68		
26			0.80		
27			0.75		

Dimension 3

Question	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Index 10					
28	0.80				
29	0.83				
30	0.74				
Index 11					
31	0.44				
32				0.82	
Index 12					
33		0.72			
34		0.84			
Index 13					
35		0.74			
36					0.83
Index 14					
37			0.62		
38			0.83		
39			0.67		

Dimension 4

Question	Factor 1	Factor 2	Factor 3
Index 15			
40	0.76		
41	0.77		
42	0.74		
43	0.76		
Index 16			
44		0.85	
45		0.85	
46		0.53	
Index 17			
47			0.88
48			0.85

Dimension 5

Question	Factor 1	Factor 2	Factor 5	Factor 8
----------	-------------	-------------	-------------	-------------

Index 18

49	0.46			
50	0.63			

Index 19

51				0.50
52			0.60	
53	0.60			
54		0.71		
55		0.69		
56		0.57		
57		0.71		
58		0.71		

Question	Factor 1	Factor 2	Factor 4	Factor 6
----------	-------------	-------------	-------------	-------------

Index 20

59				0.75
60				0.80

Index 21

61		0.41		
62		0.49		
63		0.54		

Index 22

64		0.54
65	0.59	
66	0.61	
67		0.77
68	0.54	
69	0.58	
70	0.51	
71	0.65	
72	0.63	
73	0.59	
74	0.54	
75		0.72
76	0.43	

Question	Factor 1	Factor 3	Factor 5	Factor 7	Factor 8
----------	-------------	-------------	-------------	-------------	-------------

Index 23

77		0.61			
78		0.64			
79			0.73		
80					0.81
81			0.73		
82		0.61			
83		0.71			
84		0.58			

Index 24

85		0.46
86		0.75

Index 25

87	0.38
88	0.41

NOTE: Each dimension was factored independently with the number of factors limited to the number of indices currently found in each dimension respectively. The factors were kept orthogonal for this analysis.

APPENDIX H

SUMMARY OF REGRESSION RESULTS OF INTENT ON THE HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS

<u>Question¹</u>	<u>R-Square</u>
Question 56	.136
Question 58	.177
Question 7	.199
Question 85	.214
Question 79	.223
Question 50	.229
Question 61	.236
Question 27	.240
Question 71	.243
Question 88	.245
Question 83	.247
Question 45	.249
Question 22	.251
Question 53	.252
Question 32	.254
Question 82	.255
Question 52	.256
Question 8	.257
Question 14	.258
Question 59	.259
Question 55	.260
Question 77	.261
Question 68	.262
Question 69	.263
Question 57	.264
Question 64	.264

Question 33	.265
Question 30	.266
Question 24	.266
Question 23	.267
Question 1	.267
Question 2	.268
Question 80	.268
Question 63	.269
Question 20	.269
Question 84	.269
Question 3	.270
Question 13	.270
Question 62	.270
Question 75	.271
Question 42	.271
Question 19	.271
Question 34	.271
Question 18	.272
Question 48	.272
Question 28	.272
Question 12	.272
Question 37	.272
Question 60	.273
Question 46	.273
Question 10	.273
Question 54	.273
Question 21	.273
Question 38	.273
Question 40	.273
Question 72	.273
Question 66	.274
Question 81	.274
Question 78	.274
Question 65	.274
Question 76	.274
Question 29	.274

Question 36	.274
Question 39	.274
Question 35	.274
Question 44	.274
Question 26	.274
Question 47	.274
Question 16	.274
Question 4	.274
Question 73	.274
Question 74	.274
Question 43	.274
Question 49	.274
Question 5	.274
Question 51	.274
Question 6	.275
Question 87	.275
Question 86	.275
Question 9	.275
Question 11	.275
Question 67	.275
Question 70	.275
Question 17	.275

1 Survey questions are listed in Appendix B. Rank ordering of survey questions is based on the fourth and fifth decimal place computations found in the regression analysis.

APPENDIX I

HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS ENTERING THE DISCRIMINANT ANALYSIS BY STATED CAREER INTENT

<u>Question</u>	<u>Wilks'</u> <u>Lambda</u>	<u>Sig.</u>
Question 7	.802	0.0001
Question 58	.783	0.01
Question 85	.772	0.01
Question 53	.765	0.01
Question 79	.760	0.01
Question 61	.754	0.01
Question 28	.751	0.01
Question 86	.748	0.01
Question 50	.746	0.01
Question 27	.743	0.01
Question 71	.742	0.01
Question 88	.739	0.01
Question 22	.738	0.01
Question 83	.736	0.01
Question 42	.735	0.01
Question 82	.734	0.01
Question 8	.733	0.01
Question 59	.732	0.01
Question 52	.731	0.01
Question 14	.730	0.01
Question 69	.729	0.01
Question 30	.728	0.01
Question 64	.727	0.01
Question 55	.726	0.01
Question 57	.726	0.01

Question 45	.725	0.01
Question 33	.725	0.01
Question 32	.724	0.01
Question 24	.723	0.01
Question 80	.723	0.01
Question 68	.722	0.01
Question 77	.722	0.01
Question 23	.721	0.01
Question 65	.721	0.01
Question 78	.720	0.01
Question 63	.720	0.01
Question 20	.720	0.01
Question 1	.719	0.01
Question 2	.719	0.01
Question 12	.718	0.01
Question 13	.718	0.01
Question 35	.718	0.01
Question 84	.718	0.01
Question 62	.717	0.01
Question 75	.717	0.01
Question 3	.717	0.01
Question 37	.717	0.01
Question 38	.716	0.01
Question 54	.716	0.01
Question 44	.716	0.01
Question 48	.716	0.01
Question 19	.716	0.01
Question 18	.715	0.01
Question 46	.715	0.01
Question 10	.715	0.01
Question 40	.715	0.01
Question 73	.715	0.01
Question 31	.715	0.01
Question 34	.714	0.01
Question 39	.714	0.01
Question 60	.714	0.01

Question 16	.714	0.01
Question 17	.714	0.01
Question 76	.714	0.01
Question 72	.714	0.01
Question 47	.714	0.01

1 Survey questions are as listed in Appendix B. Rank ordering of questions in this appendix was based on fourth and fifth decimal place computations in the analysis.

APPENDIX J

MEANS AND STANDARD DEVIATIONS FOR THOSE SURVEY QUESTIONS IN THE DISCRIMINANT ANALYSIS BY STATED INTENT TO REENLIST

<u>Questions</u>	<u>Stated Reenlistment Intentions</u>			
	<u>Remain</u>	<u>Undec.</u>	<u>Leave</u>	<u>F-Ratio</u>
	<u>N=4605</u>	<u>N=3359</u>	<u>N=8715</u>	
Question 56	3.68 (1.24)	3.26 (1.27)	2.44 (1.32)	1456.6
Question 7	3.55 (1.09)	3.26 (1.11)	2.61 (1.19)	925.42
Question 58	3.36 (1.26)	2.86 (1.26)	2.30 (1.24)	689.11
Question 85	4.19 (0.99)	3.82 (1.12)	3.49 (1.27)	549.73
Question 53	3.12 (1.28)	2.84 (1.24)	2.17 (1.19)	455.56
Question 79	1.39 (1.39)	1.42 (1.42)	1.47 (1.47)	390.07
Question 61	1.14 (1.14)	1.10 (1.10)	1.10 (1.10)	343.66
Question 28	3.96 (0.98)	3.97 (0.99)	3.92 (1.06)	305.67
Question 86	3.90 (1.39)	3.89 (1.38)	3.38 (1.59)	275.25
Question 50	2.74 (1.15)	2.44 (1.10)	1.95 (1.03)	250.77
Question 27	3.37 (1.13)	3.00 (1.11)	2.76 (1.14)	230.58
Question 71	3.30 (1.22)	3.01 (1.21)	2.51 (1.24)	213.26

Question 88	3.30 (1.18)	3.25 (1.17)	3.02 (1.23)	199.01
Question 22	3.36 (1.17)	3.15 (1.19)	2.85 (1.20)	186.15
Question 83	2.62 (1.22)	2.34 (1.15)	2.09 (1.14)	174.82
Question 42	3.44 (1.03)	3.41 (1.04)	3.20 (1.10)	164.91
Question 82	3.07 (1.18)	2.88 (1.16)	2.67 (1.20)	156.13
Question 8	2.90 (1.13)	2.65 (1.12)	2.11 (1.06)	148.30
Question 59	2.90 (1.12)	2.86 (1.14)	2.53 (1.16)	141.22
Question 52	3.78 (1.27)	3.67 (1.29)	3.33 (1.38)	134.77
Question 14	2.66 (1.13)	2.40 (1.10)	2.11 (1.08)	128.87
Question 69	3.32 (1.18)	3.16 (1.11)	2.78 (1.14)	123.51
Question 30	3.35 (1.04)	3.27 (1.05)	3.20 (1.11)	118.58
Question 64	3.33 (1.33)	2.99 (1.32)	2.65 (1.36)	114.03
Question 55	3.82 (1.19)	3.54 (1.30)	3.07 (1.37)	109.80
Question 57	3.49 (1.16)	3.07 (1.18)	2.61 (1.23)	105.93
Question 45	3.78 (0.98)	3.73 (0.98)	3.66 (1.04)	102.31
Question 33	3.22 (1.10)	3.03 (1.11)	2.84 (1.13)	98.94
Question 32	3.47 (1.04)	3.45 (1.05)	3.36 (1.12)	95.80
Question 24	4.01 (0.93)	3.90 (0.95)	3.80 (1.00)	92.87

Question 80	2.25 (1.31)	2.15 1.27)	2.11 (1.28)	90.09
Question 68	3.47 (1.17)	3.21 (1.17)	2.85 (1.21)	87.48
Question 77	3.05 (1.24)	2.91 (1.25)	2.63 (1.27)	85.04
Question 23	3.64 (1.09)	3.53 (1.11)	3.30 (1.15)	82.72
Question 65	3.70 (1.15)	3.43 (1.16)	3.12 (1.23)	80.52
Question 78	3.04 (1.33)	2.84 (1.32)	2.49 (1.34)	78.44
Question 63	3.00 (1.18)	2.78 (1.16)	2.46 (1.14)	76.46
Question 20	3.23 (1.18)	3.02 (1.20)	2.78 (1.20)	74.59
Question 1	2.96 (0.92)	2.81 (0.89)	2.64 (0.92)	72.79
Question 2	3.25 (1.02)	3.19 (0.99)	2.89 (1.06)	71.09
Question 12	3.27 (1.00)	3.08 (0.99)	2.78 (1.00)	69.46
Question 13	2.74 (1.15)	2.62 (1.13)	2.33 (1.10)	67.90
Question 35	3.15 (1.04)	2.98 (1.04)	2.70 (1.05)	66.41
Question 84	2.79 (1.19)	2.68 (1.17)	2.47 (1.23)	64.99
Question 62	3.12 (1.17)	2.89 (1.11)	2.50 (1.09)	63.62
Question 75	3.25 (1.18)	3.01 (1.18)	2.78 (1.21)	62.30
Question 3	2.93 (1.06)	2.72 (1.03)	2.34 (1.04)	61.03
Question 37	3.13 (1.02)	3.04 (1.04)	2.83 (1.04)	59.81

Question 38	3.01 (1.04)	2.85 (1.03)	2.63 (1.05)	58.65
Question 54	3.86 (1.23)	3.50 (1.33)	3.05 (1.44)	57.53
Question 44	3.48 (1.09)	3.39 (1.11)	3.28 (1.16)	56.45
Question 48	3.44 (1.00)	3.30 (0.99)	3.05 (1.06)	55.41
Question 19	3.48 (1.15)	3.33 (1.16)	3.10 (1.20)	54.41
Question 18	3.48 (1.14)	3.29 (1.12)	3.10 (1.19)	53.45
Question 46	3.88 (0.90)	3.83 (0.91)	3.70 (0.96)	52.52
Question 10	2.81 (1.14)	2.62 (1.08)	2.20 (1.06)	51.62
Question 40	3.18 (1.02)	3.05 (1.04)	2.86 (1.06)	50.75
Question 73	3.06 (1.07)	2.83 (1.05)	2.52 (1.06)	49.90
Question 31	3.25 (1.03)	3.19 (1.03)	3.04 (1.09)	49.08
Question 34	3.03 (1.05)	2.83 (1.04)	2.60 (1.06)	48.29
Question 39	3.34 (0.99)	3.28 (1.00)	3.11 (1.04)	47.53
Question 60	2.58 (1.12)	2.48 (1.14)	2.23 (1.17)	46.78
Question 16	3.64 (1.20)	3.46 (1.20)	3.20 (1.29)	46.06
Question 17	3.77 (1.18)	3.62 (1.18)	3.34 (1.27)	45.36
Question 76	3.02 (1.10)	2.82 (1.05)	2.52 (1.06)	44.68
Question 72	2.95 (1.14)	2.72 (1.12)	2.36 (1.10)	44.03

Question 47	3.40	3.30	3.05	43.39
	(1.04)	(0.98)	(1.08)	

APPENDIX K

HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS OF HIGH RETENTION UNITS ENTERING THE DISCRIMINANT ANALYSIS BY STATED CAREER INTENT

<u>Question</u>	<u>Wilks'</u> <u>Lambda</u>	<u>Sig.</u>
Question 56	.852	0.0001
Question 56	.845	0.0001
Question 58	.809	0.0001
Question 50	.787	0.01
Question 85	.775	0.01
Question 7	.765	0.01
Question 44	.753	0.01
Question 88	.745	0.01
Question 83	.739	0.01
Question 30	.734	0.01
Question 79	.730	0.01
Question 61	.727	0.01
Question 71	.724	0.01
Question 69	.721	0.01
Question 80	.719	0.01
Question 54	.716	0.01
Question 86	.714	0.01
Question 52	.712	0.01
Question 14	.710	0.01
Question 59	.708	0.01
Question 2	.707	0.01
Question 32	.705	0.01
Question 33	.703	0.01
Question 65	.701	0.01

Question 82	.700	0.01
Question 87	.699	0.01
Question 38	.698	0.01
Question 46	.696	0.01
Question 47	.695	0.01
Question 84	.694	0.01
Question 67	.693	0.01
Question 41	.692	0.01
Question 63	.691	0.01
Question 53	.689	0.01
Question 22	.688	0.01
Question 27	.687	0.01
Question 68	.686	0.01
Question 57	.685	0.01
Question 15	.684	0.01
Question 36	.683	0.01
Question 19	.682	0.01
Question 1	.681	0.01
Question 75	.681	0.01
Question 70	.680	0.01
Question 39	.679	0.01
Question 9	.678	0.01
Question 10	.677	0.01
Question 8	.677	0.01
Question 24	.676	0.01
Question 23	.675	0.01
Question 20	.674	0.01
Question 45	.674	0.01
Question 35	.673	0.01
Question 76	.672	0.01
Question 18	.672	0.01
Question 17	.671	0.01
Question 51	.671	0.01
Question 25	.670	0.01

APPENDIX L

MEANS AND STANDARD DEVIATIONS FOR THOSE SURVEY QUESTIONS IN THE DISCRIMINANT ANALYSIS FOR HIGH RETENTION UNITS BY STATED INTENT TO REENLIST

<u>Questions</u>	<u>Stated Reenlistment Intentions</u>			
	<u>Remain</u>	<u>Undec.</u>	<u>Leave</u>	<u>F-Ratio</u>
	<u>N=944</u>	<u>N=654</u>	<u>N=1420</u>	
Question 56	3.67 (1.24)	3.28 (1.25)	2.49 (1.31)	251.25
Question 58	3.39 (1.27)	2.89 (1.27)	2.30 (1.25)	161.96
Question 50	2.83 (1.13)	2.53 (1.11)	1.99 (1.03)	123.18
Question 85	4.17 (1.02)	3.80 (1.18)	3.52 (1.25)	98.55
Question 7	3.57 (1.08)	3.31 (1.13)	2.68 (1.19)	83.17
Question 44	3.40 (1.12)	3.33 (1.13)	3.32 (1.19)	73.48
Question 88	3.34 (1.16)	3.37 (1.14)	3.21 (1.21)	65.56
Question 83	2.68 (1.22)	2.32 (1.13)	2.13 (1.16)	58.92
Question 30	3.29 (1.04)	3.26 (0.98)	3.29 (1.09)	53.87
Question 79	3.43 (1.41)	3.03 (1.43)	2.68 (1.47)	49.27
Question 61	2.98 (1.12)	2.92 (1.11)	2.66 (1.10)	45.41

Question 71	3.37 (1.19)	3.06 (1.20)	2.62 (1.25)	42.17
Question 69	3.30 (1.14)	3.27 (1.09)	2.89 (1.13)	39.47
Question 80	2.29 (1.36)	2.09 (1.24)	2.04 (1.24)	37.03
Question 54	3.90 (1.21)	3.43 (1.37)	3.05 (1.44)	34.91
Question 86	4.09 (1.29)	3.96 (1.36)	3.57 (1.55)	33.03
Question 52	3.76 (1.30)	3.64 (1.32)	3.38 (2.38)	31.36
Question 14	2.69 (1.14)	2.46 (1.11)	2.13 (1.08)	29.88
Question 59	2.85 (1.10)	2.81 (1.18)	2.58 (1.12)	28.54
Question 2	3.26 (1.00)	3.27 (1.00)	2.97 (1.07)	27.30
Question 32	3.38 (1.02)	3.45 (1.05)	3.41 (1.08)	26.18
Question 33	3.14 (1.11)	2.97 (1.12)	2.84 (1.11)	25.21
Question 65	3.68 (1.11)	3.43 (1.17)	3.17 (1.20)	24.28
Question 82	3.12 (1.17)	2.90 (1.17)	2.74 (1.20)	23.39
Question 87	2.76 (1.32)	2.45 (1.25)	2.20 (1.20)	22.56
Question 38	3.00 (1.02)	2.83 (1.03)	2.64 (1.02)	21.80
Question 46	3.85 (0.88)	3.77 (0.92)	3.77 (0.89)	21.11
Question 47	3.45 (1.05)	3.38 (0.97)	3.13 (1.07)	20.46
Question 84	2.80 (1.18)	2.73 (1.13)	2.53 (1.22)	19.85

Question 67	3.38 (1.31)	3.20 (1.31)	2.95 (1.38)	19.28
Question 41	3.40 (1.13)	3.41 (1.13)	3.29 (1.19)	18.75
Question 63	2.90 (1.19)	2.75 (1.14)	2.46 (1.15)	18.24
Question 53	3.18 (1.26)	2.88 (1.27)	2.28 (1.21)	17.77
Question 22	3.34 (1.18)	3.17 (1.20)	2.86 (1.19)	17.32
Question 27	3.37 (1.16)	3.21 (1.13)	3.12 (1.14)	16.92
Question 68	3.47 (1.16)	3.31 (1.14)	2.94 (1.18)	16.52
Question 57	3.56 (1.16)	3.07 (1.20)	2.61 (1.24)	16.13
Question 15	3.96 (1.17)	3.93 (1.17)	3.66 (1.28)	15.76
Question 36	3.39 (0.98)	3.32 (0.94)	3.22 (1.01)	15.41
Question 19	3.47 (1.15)	3.35 (1.12)	3.16 (1.18)	15.07
Question 1	2.95 (0.92)	2.87 (0.85)	2.66 (0.92)	14.75
Question 75	3.20 (1.16)	3.11 (1.16)	2.83 (1.19)	14.44
Question 70	3.40 (1.15)	3.19 (1.17)	2.96 (1.14)	14.15
Question 39	3.26 (0.97)	3.26 (1.02)	3.13 (1.04)	13.87
Question 9	2.72 (1.17)	2.55 (1.14)	2.26 (1.06)	13.60
Question 10	2.90 (1.11)	2.77 (1.07)	2.30 (1.06)	13.34
Question 8	2.90 (1.12)	2.68 (1.13)	2.17 (1.08)	13.09

Question 24	3.99 (0.94)	3.90 (0.95)	3.87 (0.98)	12.85
Question 23	3.62 (1.11)	3.57 (1.10)	3.30 (1.16)	12.64
Question 20	3.21 (1.19)	3.00 (1.18)	2.79 (1.21)	12.42
Question 45	3.75 (0.97)	3.66 (1.00)	3.69 (1.02)	12.21
Question 35	3.12 (1.05)	2.90 (1.05)	2.74 (1.06)	12.00
Question 76	2.97 (1.11)	2.86 (1.02)	2.56 (1.02)	11.80
Question 18	3.48 (1.13)	3.31 (1.14)	3.13 (1.20)	11.60
Question 17	3.78 (1.17)	3.69 (1.17)	3.41 (1.27)	11.42
Question 51	3.74 (1.06)	3.72 (1.07)	3.56 (1.17)	11.24
Question 25	3.38 (1.17)	3.19 (1.16)	2.99 (1.17)	11.06

APPENDIX M

HUMAN RESOURCE MANAGEMENT SURVEY QUESTIONS ENTERING THE DISCRIMINANT ANALYSIS BY STATED CAREER INTENT FOR LOW RETENTION UNITS

<u>Question</u>	<u>Wilk's</u>	
	<u>lambda</u>	<u>sig.</u>
Question 56	.864	0.00001
Question 58	.821	0.00001
Question 85	.799	0.01
Question 50	.786	0.01
Question 7	.799	0.01
Question 61	.766	0.01
Question 86	.762	0.01
Question 71	.758	0.01
Question 32	.755	0.01
Question 64	.752	0.01
Question 35	.749	0.01
Question 82	.752	0.01
Question 27	.746	0.01
Question 79	.742	0.01
Question 42	.740	0.01
Question 55	.738	0.01
Question 20	.735	0.01
Question 80	.733	0.01
Question 2	.732	0.01
Question 72	.730	0.01
Question 52	.728	0.01
Question 22	.726	0.01
Question 18	.724	0.01
Question 25	.723	0.01

Question 23	.722	0.01
Question 8	.720	0.01
Question 63	.719	0.01
Question 88	.718	0.01
Question 75	.716	0.01
Question 16	.715	0.01
Question 30	.714	0.01
Question 78	.712	0.01
Question 83	.711	0.01
Question 45	.709	0.01
Question 66	.708	0.01
Question 15	.708	0.01
Question 70	.706	0.01
Question 24	.705	0.01
Question 46	.704	0.01
Question 87	.703	0.01
Question 36	.703	0.01
Question 53	.702	0.01
Question 10	.702	0.01
Question 9	.701	0.01
Question 59	.700	0.01
Question 60	.700	0.01
Question 12	.699	0.01
Question 51	.699	0.01

APPENDIX N

MEANS AND STANDARD DEVIATIONS FOR THOSE SURVEY QUESTIONS IN THE DISCRIMINANT ANALYSIS OF LOW RETENTION UNITS BY STATED INTENT TO REENLIST

<u>Questions</u>	<u>Stated Reenlistment Intentions</u>			
	<u>Remain</u>	<u>Undec.</u>	<u>leave</u>	<u>f-Ratio</u>
	N=947	N=670	N=1868	
Question 57	3.43 (1.19)	3.00 (1.15)	2.65 (1.22)	126.2
Question 56	3.65 (1.27)	3.26 (1.11)	2.50 (1.32)	256.68
Question 58	3.36 (1.25)	2.76 (1.21)	2.31 (1.23)	168.78
Question 85	4.22 (0.95)	3.85 (1.12)	3.48 (1.26)	128.26
Question 50	2.77 (1.13)	2.48 (1.06)	1.98 (1.03)	103.77
Question 7	3.54 (1.09)	3.25 (1.06)	2.68 (1.21)	86.37
Question 61	3.06 (1.14)	2.94 (1.10)	2.71 (1.07)	74.80
Question 86	3.90 (1.38)	4.05 (1.29)	3.49 (1.59)	66.13
Question 71	3.34 (1.21)	3.07 (1.18)	2.59 (1.11)	59.01
Question 32	3.42 (1.02)	3.39 (1.09)	3.30 (1.12)	53.46
Question 64	3.34 (1.31)	2.93 (1.21)	2.61 (1.33)	48.87

Question 82	3.02 (1.19)	2.85 (1.14)	2.73 (1.17)	45.02
Question 35	3.17 (1.01)	2.97 (1.01)	2.68 (1.05)	41.88
Question 27	3.33 (1.15)	3.24 (1.10)	3.13 (1.12)	39.19
Question 79	3.46 (1.38)	3.01 (1.41)	2.69 (1.46)	37.07
Question 42	3.40 (1.02)	3.38 (1.01)	3.20 (1.09)	35.00
Question 55	3.75 (1.25)	3.46 (1.28)	3.08 (1.37)	33.16
Question 20	3.24 (1.19)	2.93 (1.18)	2.81 (1.17)	31.54
Question 80	2.38 (1.33)	2.20 (1.26)	2.24 (1.30)	30.06
Question 2	3.25 (1.02)	3.25 (0.97)	2.88 (1.06)	28.71
Question 72	2.90 (1.14)	2.71 (1.13)	2.41 (1.06)	17.51
Question 52	3.75 (1.28)	3.60 (1.30)	3.39 (1.56)	26.40
Question 22	3.36 (1.19)	3.12 (1.15)	2.89 (1.19)	25.41
Question 18	3.44 (1.14)	3.18 (1.12)	3.16 (1.18)	24.49
Question 25	3.35 (1.14)	3.25 (1.13)	3.00 (1.17)	23.65
Question 23	3.58 (1.07)	3.49 (1.10)	3.33 (1.14)	22.86
Question 8	2.90 (1.15)	2.63 (1.09)	2.17 (1.06)	22.12
Question 63	3.01 (1.19)	2.73 (1.10)	2.51 (1.11)	21.42
Question 88	1.14 (1.19)	1.10 (1.12)	1.06 (1.21)	20.76

Question 75	3.30 (1.18)	3.08 (1.20)	2.78 (1.20)	20.16
Question 16	3.66 (1.18)	3.39 (1.20)	3.24 (1.26)	19.59
Question 30	3.35 (1.03)	3.23 (1.05)	3.20 (1.08)	19.05
Question 78	2.91 (1.31)	2.84 (1.36)	2.49 (1.33)	18.55
Question 83	2.56 (1.21)	2.24 (1.13)	2.12 (1.13)	18.17
Question 45	3.78 (0.98)	3.73 (0.95)	3.79 (1.01)	17.72
Question 66	3.38 (1.13)	3.00 (1.10)	2.72 (1.13)	17.27
Question 15	3.95 (1.15)	3.72 (1.23)	3.67 (1.24)	16.85
Question 70	3.45 (1.11)	3.21 (1.09)	2.81 (1.16)	16.46
Question 24	3.98 (0.96)	3.86 (0.90)	3.78 (0.95)	16.07
Question 46	3.86 (0.90)	3.83 (0.87)	3.70 (0.95)	15.71
Question 44	3.52 (1.08)	3.38 (1.05)	3.29 (1.13)	15.36
Question 87	2.58 (1.29)	2.32 (1.18)	2.01 (1.13)	15.04
Question 36	3.43 (0.97)	3.32 (0.95)	3.11 (0.99)	14.71
Question 53	3.17 (1.28)	2.86 (1.22)	2.29 (1.21)	14.40
Question 10	2.85 (1.14)	2.67 (1.06)	2.29 (1.06)	14.10
Question 9	2.74 (1.17)	2.48 (1.08)	2.19 (1.06)	13.82
Question 59	2.98 (1.09)	2.88 (1.13)	2.62 (1.15)	13.55

Question 60	2.77 (1.11)	2.49 (1.11)	2.33 (1.19)	13.29
Question 12	3.29 (1.04)	3.08 (0.97)	2.79 (1.01)	13.04
Question 51	3.73 (1.09)	3.71 (1.06)	3.53 (1.15)	12.80
Question 84	2.77 (1.19)	2.63 (1.17)	2.55 (1.23)	12.57
Question 33	3.21 (1.06)	3.03 (1.08)	2.82 (1.11)	12.34

BIBLIOGRAPHY

Abrahams, Norman M. and Lacey, Lynn A. The Navy Adjective List as a Predictor of Enlisted Retention. SRM 73-2, San Diego, California. Naval Personnel and Training Research Laboratory, October 1972.

Acton Society Trust. Size and morale. London: Author, 1953.

Administrative Management Society. 1965. Survey: Turnover of office personnel, Administrative Management 26:55-58.

Administrative Management Society. 1966. AMS reports results of turnover survey, Administrative Management 27:43-46.

Albrow, Martin. 1970. Bureaucracy (New York: Praeger).

Alley, William E. and Gould, R. Bruce. Feasibility of Estimating Personnel Turnover from Survey Data - A Longitudinal Study, ADA 018 777, Air Force Human Resources Laboratory, October, 1975 (AFHRL-TR-70-49).

Allison, Paul D. 1974. Inter-organizational mobility of academic scientists, 69th Ann. Meet. American Sociological Association, Montreal, Canada.

Altman, Stuart H. and Fechter, Alan E. "Military Manpower Procurement: The Supply of Military Personnel in the Absence of a Draft," American Economic Review, April 1969, pp. 19-31.

Anderson, B. W. 1974. Empirical generalizations on labor turnover, Labor and Manpower, ed. Richard Pegnetter (Iowa City: Center for Labor and Management, College of Business Admin., Univ. Iowa).

Archibald, Kathleen A. 1971. The Supply of Professional Nurses and Their Recruitment and Retention by Hospitals (New York: New York City Rand Institute).

Archibald, Kathleen A. 1973. Sex and the Public Service (Ottawa: Information Canada).

Argyle, M., Gardner, G., Cioffi, I. Supervisory methods related to productivity, absenteeism and labor turnover. Human Relations, 1958, 11, 23-40.

Argyris, Chris. 1973. Personality and organization theory revisited, Admin. Sci. Quart. 18:141-67.

Armknacht, P. A. and Early, J. F. Quits in manufacturing: A study of their causes. Monthly Labor Review, 1972, 95, 31-37.

Atchison, T. J. and Lefferts, E. A. The prediction of turnover using Herzberg's job satisfaction technique. Personnel Psychology, 1972, 15, 53-64.

Atkin, R.; Ball, J. "Why Employees Leave Organizations and Why They Stay", Working paper #53-77-78, Revised, July, 1978, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pa.

Atwater, David C., Skrobiszewski, Melitta; Alf, Edward. A Preliminary Selection of Biographical Items For Predicting Recruit Attrition, Technical Note 76-6, San Diego, California: Navy Personnel Research and Development Center, May 1976.

Azumi, Koya. 1969. Higher Education and Business Recruitment in Japan (New York: Teachers College).

Azumi, Koya, and Jerald Hage (eds.). 1972. Organizational Systems (Lexington: D. C. Heath).

Bachman, Jerald G. Values, Preferences and Perceptions Concerning Military Service: Part II, AD 775 205, Ann Arbor, Michigan; Survey Research Center, Institute for Social Research, The University of Michigan, February, 1974.

Bassett, G. A. A study of factors associated with turnover of exempt personnel. Crotonville, N.Y.: Behavioral Research Service, General Electric Company, 1967.

Baumgartel, H., Sobol, R. Background and organizational factors in absenteeism. Personnel Psychology, 1959, 12, 431-443.

Becker, Gary S. 1964. Human Capital (New York: Columbia University Press).

Behman, Sara. 1968. Wage-determination process in U.S. manufacturing, Quart. J. Econ. 82:117-42.

Bell, Daniel. 1973. The Coming of Post-Industrial Society (New York: Basic Books).

Berg, Ivar. 1970. Education and Jobs (New York: Praeger).

Berry, N. H. and Nelson, P. D. "The Fate of School Dropouts in the Marine Corps," Personnel and Guidance Journal, September, 1966, pp. 20-23.

Blumberg, Paul. 1969. Industrial Democracy (New York: Schocken).

Booth, Richard F. and Hoiberg, Anne. Change in Marine Recruits' Attitudes Related to Recruit Characteristics and Drill Instructors' Attitudes, Psychological Reports, 1973, 33, 63-71. San Diego, California: Navy Medical Neuropsychiatric Research Unit.

Booth, Richard F., and Hoiberg, Anne. "Structure and Measurement of Marine Recruit Attitudes," Journal of Applied Psychology, 1974, Vol. 59, No. 2, 236-238 and Report No. 72-16, Navy Medical Neuropsychiatric Research Unit, San Diego, California.

Bowers, C. G. The scientific data based approach to organization development, Part 2. In Hite, A. L. (ed.), Organizational Development: the State of the Art. Ann Arbor, Michigan: Foundation for Research on Human Behavior, 1971.

Bowers, David G. Organizational Practices and the Decision to Reenlist, AD 772 414, Ann Arbor, Michigan: Institute for Social Research, University of Michigan, December, 1973.

Bowers, David G. and Bachman, Jerald G. Military Manpower and Modern Values, AD 787 826, Ann Arbor, Michigan: Institute for Social Research, University of Michigan, October, 1974.

Bowers, David G., Franklin, Jerome L. Survey Guided Development: Data Based Organizational Change, NR 170-719, University of Michigan, June 1975.

Bowey, Angela M. 1969. Labor stability curves and a labor stability index, Brit. J. Ind. Relations 7:71-83.

Bowey, Angela M. 1971. A measure of labor turnover stability, Personnel Management 3:26-28,31.

Bowey, Angela M. 1974. A Guide to Manpower Planning (London: Macmillan).

Bowser, Samuel E. Non-Cognitive Factors as Predictors of Individual Suitability for Service in the U.S. Navy, AD 780 438, San Diego, California: Navy Personnel Research and Development Center, April, 1974.

Boyd, H. Alton, Jr. and Boyles, Wiley R. Attitudes as Predictors of Retention for Army Pilots, AD 688 816, Virginia: The George Washington University, Human Resources Research Office, May 1969.

Boyd, J. B. Interests of engineers related to turnover, selection, and management. Journal of Applied Psychology, 1961, 45, 143-149.

Brayfield, A. H. and Crockett, W. H. Employee attitudes and employee performance. Psychological Bulletin, 1955, 52, 396-424.

Brown, David G. 1967. The Mobile Professors (Washington, D.C.: American Council on Education).

Bruni, John R., Jones, Allan P. and James, Lawrence R. Correlates of First-term Reenlistment Behavior Aboard Navy Ships, ADA 015 687, Fort Worth, Texas: Texas Chirstian University, Insitute of Behavioral Research, May 1, 1975, (IBR Technical Report No. 75-8).

Bryant, Donald T. 1965. A survey of the development of manpower planning policies, Brit J. Ind. Relation 3:279-90.

Burgoyne, John. 1968. Analyzing the induction crisis, Personnel Managment 1:33-35.

Burke, R. J. and Wilcox, D. S. Absenteeism and turnover among female telephone operators. Personnel Psychology, 1972, 25, 639-648.

Burns, Tom, and G. M. Stalker. 1961. The Management of Innovation (Chicago: Quadrangle).

Burton, John F., and John E. Parker, 1969. Interindustry variations in voluntary labor mobility, Ind. Labor Relations Rev. 22:199-216.

Carlisle, Rayon Hughes, Jr. An Investigation Into the Job Factors Affecting the Reenlistment of Marines in the Telecommunications Fields, AD-A007 465, Monterey, California: Naval Postgraduate School, March, 1975.

Carlson, Richard O. 1961. Succession and performance among school superintendents, Admin. Sci. Quart. 6:210-27.

Carlson, Richard O. 1962. Executive Succession and Organizational Change (Chicago: Midwest Administration Center, Univ. of Chicago).

Cascio, W. F. Turnover, biographical data, and fair employment practice. Journal of Applied Psychology, 1976, 61, 576-580.

Catania, James J. 1964. Why do nurses change jobs? Hospital Management 98:93-94.

Caves, Richard. 1964. American Industry (Englewood Cliffs: Prentice-Hall).

Champion, Joel T. 1973. Toward a Theory of Managerial Succession (Springfield: Nat. Tech. Inf. Serv., AD-763 720).

Chaplin, David. 1966. Industrial labor recruitment in Peru, American Latina, vol. 9.

Chaplin, David. 1967. The Peruvian Industrial Labor Force (Princeton: Princeton University Press).

Chaplin, David. 1968. Labor turnover in the Peruvian textile industry, Brit. J. Ind. Relations 6:58-78.

Charters, W. W. 1967. Some determinants of teacher separations from midwestern school systems (unpublished, Center for Advanced Study of Educational Administration, Univ. Oreg.).

Charters, W. W. 1970. Some factors affecting teacher survival in school districts, Am. Ed. Res. J. 7:1-27.

Cleland, C. C., Peck, R. F. Psychological determinants of tenure in institutional personnel. American Journal of Mental Deficiency, 1959, 64, 876-888.

Clowes, G. A. 1972. A dynamic model for the analysis of labor turnover, J. Roy. Stat. Soc. Ser. A, Part 2, 135:242-56.

Clum, George A., Hoibert, Anne and Kole, Delbert N. "Attitude Change in Marine Recruit Training," Psychological Reporst, 1969, 24, 311-318.

Coe, Rodney M. 1970. Sociology of Medicine (New York: McGraw-Hill).

Cole, Robert E. 1971. Japanese Blue Collar (Berkeley and Los Angeles: University of California Press. 1971 by The Regents of the University of California; reprinted by permission of the University of California Press).

Cole, Robert E. 1972. Permanent employment in Japan: Facts and fantasies, Ind. Labor Relations Rev. 26:615-30.

Conference Board. Salesmen's turnover in early employment. New York:Author, 1972.

Cooper, R., Payne, R. Age and absence: A longitudinal study in three firms. Occupational Psychology, 1965, 39, 31-43.

Coser, Lewis A. 1967. Continuities in the Study of Social Conflict (New York:Free Press).

Crawford, K. S.; Thomas, E. D. Human Resources Management and Nonjudicial Punishment Rates on Navy Ships, Navy Personnel Research and Development Center, TR 76-5, August, 1975.

Dachler, H. P. and Mobley, W. H. Construct validation of an instrumentality-expectancy-task goal model of work motivation. Some theoretical boundary conditions, Journal of Applied Psychology, 1973, 58, 397-418.

Dansereau, Fred, Jr., Cashmon, J., and Graen, G. Expectancy as a moderator of the relationship between job attitudes and turnover. Journal of Applied Psychology, 1974, 59, 228-229.

De La Mare, G., Sergeant, R. Two methods of studying changes in absence with age. Occupational Psychology, 1961, 35, 245-252.

Dewey, Donald. 1960. Labor turnover as an index of unemployment in the U.S.A. 1919-1958, J. Ind. Econ. 8:265-87.

Dillman, Everett G. 1960. A study of turnover rates in municipal government (unpublished, US. Civil Service Commission Library, Washington, D.C.).

Dodge, J. S. 1960. Why nurses leave-and what to do about it, Modern Hospital 94:116-20, 170.

Doeringer, Peter B., and Michael J. Piore. 1971. Internal Labor Markets and Manpower Analysis (Lexington: D. C. Heath).

Dore, Ronald. 1973. British Factory-Japanese Factory (Berkeley and Los Angeles: University of California Press).

Downs, Anthony. 1974. The successes and failures of federal housing policy, The Public Interest 34:124-45.

Downs, S. Labour turnover in two public service organizations. Occupational Psychology, 1967, 41, 137-142.

Drexler, John A., Jr. An Inquiry Into the Effectiveness of Managerial And Peer Goal Emphasis as Socializers of individual Values and Preferences, AD 775 308, Ann Arbor, Michigan: Institute for Social Research, University of Michigan, January, 1974.

Drexler, John A., Jr. Enlisted Skill Ratings, Draft Motivation and the Decision To Reenlist, ADA 013 080, Michigan: Institute for Social Research, The University of Michigan, June, 1975.

Drexler, John A., and David G. Bowers. 1973. Navy Retention Rates and Human Resource Management (Springfield: Nat. Tech. Inf. Serv., AD-761 656).

Drucker, Eugene H., and Schwartz, Shepard. The Prediction of AWOL, Military Skills, and Leadership Potential, AD-758 161, Alexandria, Virginia: Human Resources Research Organization, January, 1973, TR 73-1.

Dubin, R., Champoux, J., and Porter, L. Central life interests and organizational commitment of blue collar and clerical workers. administrative Science Quarterly, 1975, 20, 411-421.

Dubin, Robert. 1970. Management in Britain-Impressions of a visiting professor, J. Management Studies 7:183-98.

Dulaney, D. E. Hypotheses, habits in verbal 'operant conditioning' Journal of Abnormal and Social Psychology, 1961, 63, 251-263.

Dulaney, D. E. Awareness, rules, and prepositional control: A confrontation with S-R behavior theory. In T. R. Dixon and D. L. Horton (Eds.), Verbal behavior and general behavior theory. Englewood Cliffs, N. J.; Prentice-Hall, 1968.

Dunham, Ralph E., Patricia S. Wright, and Marjorie O. Chandler. 1966. Teaching Faculty in Universities and Four-Year Colleges, Spring, 1963 (Washington, D.C.: USGPO).

Dunnette, M. D., Arney, R. D., and Banas, P. A. Why they leave. Personnel, May/June 1973, 25-38.

Eaton, Fred R. 1968. A study of factors which influence registered staff nurses to remain in the employment of a metropolitan teaching hospital (unpublished, Program in Hospital Admin., Univ. Minn.).

Eitzen, D. Stanley, and Norman R. Yetman. 1972. Managerial change, longevity, and organizational effectiveness, Admin. Sci. Quart. 17:110-16.

Ekpo-Vfot, A. Self perceived abilities relevant in the task (SPART): A potential predictor of labor turnover in an industrial work setting. Personnel Psychology, 1976, 29, 405-416.

Ellis, Tony, and John Child. 1973. Placing stereotypes of the manager into perspective, J. Management Studies 10:233-55.

English, J. W. The turnover matrix: A theoretical model to aid in the application of resources. Academy of Management Journal, 1977, 2, 309-310.

Enns, John N. Effect of the Variable Reenlistment Bonus on Reenlistment Rates: Empirical Results for FY 1971, ADA 016 058, Santa Monica, California: The Rand Corporation, June, 1975, TR 1502 ARPA.

Etzioni, Amitai. 1964. Modern Organizations (Englewood Cliffs: Prentice-Hall).

Etzioni, Amitai (ed.). 1969. A Sociological Reader on Complex Organizations (New York: Holt, Rinehart and Winston).

Evan, William M. 1965. Conflict and performance in R and D organizations: Some preliminary findings, Ind. Management Rev. 7:37-46.

Evan, W. M. Peer-group interaction and organizational socialization: A study of employee turnover. American Sociological Review, 1963, 28, 436-440.

Fabricant, Solomon. 1969. A Primer on Productivity (New York: Random House).

Farr, J. L., O'Lary, B. S. and Bartlett, C. J. Effect of work sample test upon self-selection and turnover of job applicants. Journal of Applied Psychology, 1973, 58, 283-285.

Farraq, Abdelmegid M. 1969. The occupational structure of the labor force: Patterns and trends in selected countries, Social Facts, ed. James L. Price (New York: Macmillan).

Farris, G. F. A predictive study of turnover. Personnel Psychology, 1971, 24, 311-328.

Ferguson, L. W. Life insurance interest, ability and termination of employment. Personnel Psychology, 1958, 11, 189 - 193.

Ferris, Michael L. and Peters, Vernon M. Organization Commitment and Personnel Retention in the Military Health Care System. Thesis, Monterey, California: Naval Postgraduate School, December 1976.

Fink, S. A. and West, D. A. HRM and Safety Performance in F-4 Fighter Aircraft Squadrons. Norfolk, Virginia, Human Resource Management Center, Technical Report, August 1977.

Fishbein, M. Attitude and the prediction of behavior. In M. Fishbein (Ed.) Readings in Attitude Theory and Measurement. New York: Wiley, 1967.

Fishbein, M. and Ajzen, I. Belief, attitudes, intention and behavior. Reading, Mass.: Addison-Wesley, 1975.

Fisher, Anthony C. "The Cost of the Draft and the Cost of Ending the Draft," The American Economic Review, 1969, 59, pp. 239-254.

Fisher, Franklin M. and Morton, Anton S. "Reenlistment in the U.S. Navy: A Cost Effectiveness Study," American Economic Association, 1967, 57, pp.32-38.

First Term Enlisted Attrition, Vol. 1, H. Wallace Sinako editor, ADA 043001, Proceedings of a Conference Held at Leesburg, Virginia, April 4 - 7, 1977. Smithsonian Institution, June 1977. TR -3. 510 pgs.

Flango, Victor E., and Robert B. Brumbaugh. 1974. The dimensionality of the cosmopolitan-local construct, Admin. Sci. Quart. 19:198-210.

Fleishman, E. A. A leader behavior description for industry. In R. M. Stogdill A. E. Coons (Eds), Leader behavior: Its description and measurement. (Ohio Studies in Personnel; Research Monograph No. 88) Columbus: Ohio State University, Bureau of Business Research, 1957. (a)

Fleishman, E. A. The Leasership Opinion Questionnaire. In R. M. Stogdill A. E. Coons (Eds.), Leader behavior: Its description and measurement. (Ohio Studies in Personnel; Research Monograph No. 88) Columbus: Ohio State University, Bureau of Business Research, 1957. (b)

Fleishman, E. A. Revised manual for Leadership Opinion Questionnaire. Chicago: Science Research Associates, 1968.

Fleishman, E. A., Berniger, J. One way to reduce office turnover. Personnel, 1960, 37, 63-69.

Fleishman, E. A., Harris, E. F. Patterns of leadership behavior related to employee grievances and turnover. Personnel Psychology, 1962, 15 43-56.

Flowers, V. S., and Hughes, C., L., Why employees stay. Harvard Business Review, 1973 (July-August), 51, 49-60.

Foch, Craig and King, Nikki. "The Gatekeepers: First Term Enlisted Attrition Policies and Practices," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 24-39.

Forbes, A. F. 1971. Non-parametric methods of measuring survivor function, The Statistician 20:27-52.

Forrest, C. R., Cummings, L. L. and Johnson, A. C. Organizational participation: A critique and model. Academy of Management Review, 1977, 2, 586-601.

Fournet, Glenn, M. K. Distefano, and Margaret W. Pryer. 1966. Job satisfaction: Issues and problems, Personnel Psychology 19:165-83.

Frederico, J. M., Federico, P. and Lundquist, G. W. Predicting women's turnover as a function of extent of met salary expectations and biodemographic data. Personnel Psychology, 1976, 29, 559-566.

UNCLASSIFIED

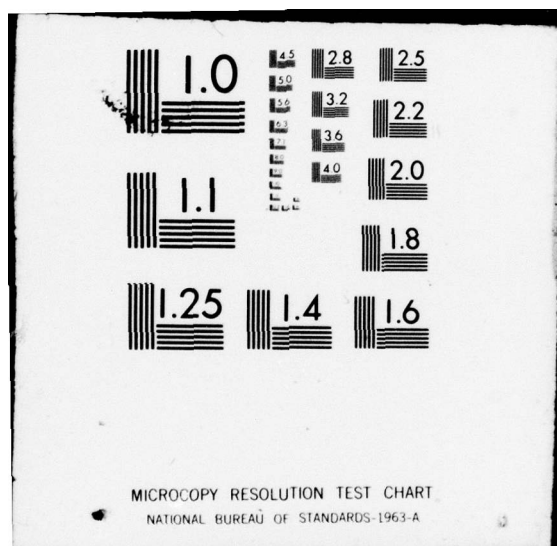
NAVAL POSTGRADUATE SCHOOL MONTEREY CA F/G 5/1
AN EVALUATION OF THE EFFECTIVENESS OF THE NAVY'S HUMAN RESOURCE--ETC(U)
JUN 79 J R ALMONY, J D REECE

F/G 5/1
URCE--ETC(U)

NL

3 OF 3
AD
A072573

END
DATE
FILMED
9-79
DDC



Frey, Robert L., Jr., Goodstast, B. E., Korman, A. K., Romanczak, A.P., and Glickamn, A. S., Reenlistment Incentives: More is Not Better in the Fleet Either, AD 786 487, Washington, D.C.: American Institutes for Research, June, 1974, (Technical Report No.4)

Friedlander, F., Walton, E. Positive and negative motivations toward work. Administrative Science Quarterly, 1964, 9, 194-207.

Fry, F. L. More on the causes of quits in manufacturing. Monthly Labor Review, 1973, June, 48-49.

Fry, Fred L. 1973. A behavioral analysis of economic variables affecting turnover, J. Behav. Econ. 2:247-95.

Gallaway, Lowell E. 1966. Interindustry labor mobility among men, 1957-60, Social Security Bull. 29:10-22.

Gaudet, Frederick J. 1960a. The Literature on Labor Turnover (New York: Industrial Relations Newsletter).

Gaudet, Frederick J. 1960b Labor Turnover (New York: Am. Management Asscc., Res. Study 39).

Gellard, Jacques. 1967. Determinants and consequences of executive succession in government finance agencies (unpublished Master's thesis, Dept. Sociology, Univ. Chicago).

General Electric Company, Behavioral Research Service. Attitudes associated with turnover of highly regarded employees. Crotonville, N.Y.: Author, 1964. (a)

General Electric Company, Behavioral Research Service.
A comparison of work planning program with the annual performance appraisal interview approach. Crotonville, N. Y.: Author, 1964. (b)

Georgopoulos, Basil S., and Aleksander Matejko. 1976.
The American general hospital system as a complex social system, Health Serv. Res. 2:76-112.

Gillet, B. and Schwab, D. P. Convergent and discriminant validities of corresponding job descriptive index and Minnesota satisfaction questionnaire scales. Journal of Applied Psychology, 1975, 60, 313-317.

Glickman, Albert S., Goodstadt, B. E., Korman, A. K., and Romanczak, A. P., Navy Career Motivation Programs in an All-Volunteer Condition: I. A. Cognitive Map of Career Motivation, AD-759 079, Maryland: American Institutes for Research, March, 1973.

Goldsamt, Milton R. Attitudinal Changes in Category IV Perception of the Navy During Recruit Training, WTR 73-17, Washington, D.C.: Naval Personnel Research and Development Laboratory, May, 1973.

Goldthorpe, John H., David Lockwood, Frank Beehoffer, and Jenifer Platt. 1968. The Affluent Worker (Cambridge: Cambridge University Press).

Goodman, P. S. "Social Comparison Processes in Organizations", B. Straw and G. Salancik (eds) New Directions in Organizational Behavior. Chicago: St. Clair Press, 1977.

Goodstadt, Barry E., Korman, Abraham K., Romanczuk, Alan P., Frey, Jr, Robert L., Glickman Albert S. Relationship Between Organizational Beliefs, Affective Dispositions and Navy Reenlistment Intention, TR 2, Washington, D.C.: American Institutes for Research, June 1974.

Goodstadt, B. E. and A. S. Glickman. The Current Status of Enlisted Attrition in the U.S. Navy and the U.S. Marine Corps and the Search for Remedies, ADA 018234, Washington, D. C.: American Institues for Research, November, 1975.

Goodman, P. S., Salipante, P. and Paransky, H. Hiring training and retraining the hard core unemployed: A selected review. Journal of Applied Psychology, 1973, 58, 23-33.

Gordon, Phillips N. Are We Operating With Obsolete Motivational Tools, ADA 002 588, Carlisle Barracks, Pennsylvania: National Technical Information Service, U.S. Dept. of Commerce.

Gow, John S., Alfred W. Clark, and Graham S. Dossett. 1974. A path analysis of variables influencing labor turnover, Human Relations 27:703-19.

Gowler, Dan. 1969. Determinants of the supply of labor to the firm, J. Management Studies 6:73-95.

Grace. Gloria L., Holoter, Harold, Soderquist, Michele. Carreer Satisfaction as a Factor Influencing Retention, ADA 025 810, Santa Monica, California: System Development Corporation, 14 May 1976, TR4.

Graen, G. Role making processes within complex organizations. In M. D. Dunnette (Ed.) Handbook of Industrial and Organizational Psychology, Chicago: Rand-McNally, 1976, c-28.

Graen, G. and Ginsburgh, S. Job resignation as a function of role orientation and leader acceptance: A longitudinal investigation of organization assimilation. Organization Behavior and Human Performance, 1977, 19, 1-17.

Graen, G. B., Orris, J. B. and Johnson, R. Role assimilation processes in a complex organization. Journal of Vocational Behavior, 1973, 3, 395-420.

Granovetter, Mark S. 1974. Getting a Job (Cambridge: Harvard University Press).

Greeley, Andrew M. 1972. Priests in the United States (Garden City: Doubleday).

Greenburg, M. G. and McConeghy, G. "Exploratory Development Research of U.S. Navy-Marine Corps Personnel - Phase I", in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 204-218.

Gross, Llewellyn, Elliott H. Grosz, and Constantine A. Yeracaris. 1972. A general theory of labor turnover in hospitals, Patients, Physicians and Illness, ed. E. Gattly Jaco (New York: Free Press).

Grusky, Oscar. 1964. The effects of succession: A comparative study of military and business organization, The New Military, ed. Morris Janowitz (New York: Russell Sage Foundation. 1964 Russell Sage Foundation).

Grusky, Oscar, and George A. Miller (eds.). 1970. The Sociology of Organizations (New York: Free Press).

Guest, R. H. A neglected factor in labour turnover. Occupational Psychology, 1955, 29, 217-231.

Guinn, N., "USAF Attrition Trends and Identification of High-Risk Personnel," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 360-381.

Guinn, Nancy, Vitola, Bart M., and Leisey, Sandra A. Background and Interest Measures as Predictors of Success in Undergraduate Pilot Training, ADA 325 851, Brooks Air Force Base, Texas: Air Force Systems Command, Air Force Human Resources Laboratory, May, 1976, (AFHRL TR 76-9)

Guinn, Nancy, Johnson, Allan L. and Kantor, Jeffrey E. Screening for Adaptability to Military Service, (AFHRL TR 75 30) Brooks Air Force Base, Texas: Air Force Systems Command, Air Force Human Resources Laboratory, May, 1975.

Guthrie, R. V., "Navy Voluntary Release Pilot Program," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp.309-309.

Haas, J. Eugene, and Thomas E. Drabek. 1973. Complex Organizations (New York: Macmillan).

Haber, Sheldon E., Ireland T., and Slomon, Herbert. Manpower Policy and the Reenlistment Rate, AD 786 777, Virginia: The George Washington University, Graduate School of Arts and Sciences, Econometric Research on Navy Manpower Problems, 10 June 1974. (TR-1201)

Haber, Sheldon E. and Stewart, Charles T., Jr. The Responsiveness of Reenlistment to Changes in Navy Compensation, ADA 012 437, Virginia: The George Washington University, Graduate School of Arts and Sciences, 5 May 1975, TR-1254.

Hackman, J. R., and Lawler, E. E., Jr. Employee reactions to job characteristics. Journal of applied Psychology Monograph, 1971, 55, 259-286.

Hackman, J. R., and Oldham, G. R. Development of job diagnostic survey. Journal of Applied Psychology, 1975, 60, 159-170.

Hackman, J. R. and Oldham, G. R. Motivation through the design of work: Test of a theory. Organizational Behavior and Human Performance, 1976, 16, 250-279.

Hakkinen, S., Toivainen, Y. Psychological factors causing labour turnover among underground workers. Occupational Psychology, 1960, 34, 15-30.

Hall, Richard H. 1972a. Organizations (Englewood Cliffs: Prentice-Hall).

Hall, Richard H. (ed.). 1972b. The Formal Organization (New York: Basic Books).

Hand, H. H., Griffith, R. W., Mobley, W. H. Military Enlistment, Reenlistment and Withdrawal Research: A Critical Review of the Literature, TR 3, Columbia, South Carolina: Center for Management and Organizational Research, University of South Carolina, December, 1977.

Hand, H. H., Griffith, R. W., Mobly, W. H. Military Enlistment, Reenlistment and Withdrawal Research: A Critical review of the Literature, Columbia, South Carolina: Center for Management and Organizational Research, University of South Carolina, December, 1977.

Hansen, W. Lee and Weisbrod, Burton A. "Economics of the Military Draft," Quarterly Journal of Economics, 1967, 81, pp. 395-421.

Harris, Reuben T.; Eoyang, Carson K.A. A Typology of Organizational Commitment, WP#957-77, Cambridge: Massachusetts Institute of Technology, October, 1977.

Hause, John C. "Enlistment Rates for Military Service and Unemployment," The Journal of Human Resources, 1973, 8, pp. 98-107.

Hedberg, Magnus. 1967. The Process of Labor Turnover (Stockholm: Swedish Council for Personnel Admin.).

Hellriegel, D., and White, G. E. Turnover of professionals in public accounting: A comparative analysis. Personnel Psychology, 1973, 16, 239-249.

Herbst, P. G. 1963. Organizational commitment: A decision process model, Acta Sociologica 7:34-35.

Herman, J. B. Are situational contingencies limiting job attitude-job performance relationships? Organizational Behavior and Human Performance, 1973, 10, 208-224.

Herman, J. B., Dunham, R. B., and Hulin, C. L. Organizational structure, demographic characteristics and employee responses. Organizational Behavior and Human Performance, 1975, 13, 206-232.

Herman, J. B., and Hulin, C. L. Studying organizational attitudes from individual and organizational frames of reference. Organizational Behavior and Human Performance, 1972, 8, 84-108.

Herzberg, Frederick, Bernard Mausner, and Barbara Snyderman. 1959. The Motivation to Work (New York: Wiley).

Herzberg, F., Mausner, B., Peterson, R. O., and Capwell, R. F. Job attitudes: Review of research and opinions. Pittsburgh Psychological Services, 1957.

Hewitt, D., Parfitt, J. A note on working morale and size of group. Occupational Psychology, 1953, 27, 38-42.

Heydebrand, Wolf V. 1973a. Hospital Bureaucracy (New York: Dunellan).

Heydebrand, Wolf V. (ed.). 1973b. Comparative Organizations (Englewood Cliffs; Prentice-Hall).

Hickson, D. J., C. R. Hinings, C. A. Lee, R. E. Schneck, and J. M. Pennings. 1971. A strategic contingencies' theory of intraorganizational power, Admin. Sci. Quart. 16:216-29.

Hill, J. M. M. 1972. The Seafaring Career (London: Center for Applied Social Research, Tavistock Inst. Human Relations).

Hill, J. M. and Trist, E. L. Changes in accidents and other absences with length of service: A further study of their incidence and relation to each other in an iron and steel works. Human Relations, 1955, 8, 121-152

Hines, G. H. Achievement motivation, occupations, and labor turnover in New Zealand, Journal of Applied Psychology, 1973a, 58, 313-317.

Hines, George H. 1973b. The New Zealand Manger (Wellington: Hicks).

Hirschman, Albert O. 1970. Exit, Voice, and Loyalty (Cambridge: Harvard University Press).

Hoiberg, Anne and Booth, Richard F. Changes in Attitudes and Characteristics of Marine Recruits During the 1960's, San Diego, California: Navy Medical Neuropsychiatric Research Unit, Report 72-41.

Holoter, Harold A., Bloomgren, E. L., Dow, D. S., Provenzano, R. J., Stehle, G. W. and Grace, G. L., Impact of Navy Career Counseling on Personnel Satisfaction and Reenlistment, AD-757 801, Santa Monica, California: System Development Corporation, 28 February 1973, NR 170-750

Holoter, Harold A., Stehle, G. W., Conner, L. V. and Grace, G. L., Impact of Navy Career Counseling on Personnel Satisfaction and Reenlistment. Phase 2, AD 777 461, Santa Monica, California: System Development Corporation, 1 April 1974, TR 3.

Holz, R. F. and Schreiber, E. M., "Increasing the Retention of Army Volunteers: Meaningful Work May Be The Answer," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 475-494.

Homans, George C. 1950. The Human Group (New York: Harcourt).

Huck, Daniel F. and Midlam, Kenneth D. "A Model to analyze the Cost Impact of First-Term Attrition in the Navy and Marine Corps," in Sinaiko, H. Wallace, editor, First Term enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp.328-350.

Hulin, C. L. Job satisfaction and turnover in a female clerical poulation. Journal of Applied Psychology, 1966, 50, 280-285.

Hulin, C. L. Effects of changes in job-satisfaction levels on employee turnover. Journal of Applied Psychology, 1968, 52, 122-126.

Hulin, C. L., Blood, M. R. Job enlargements, individual differences, and worker responses. Psychological Bulletin, 1968, 69, 41-55.

Hunter, L. C. 1967. Income structure and mobility, Brit. J. Ind. Relations 5:386-98.

Hyman, Richard. 1970. Economic motivation and labor stability Brit. J. Ind. Relations 8:159-78.

Indik, Bernard P. 1965. Organization size and member participation, Human Relations 18:339-50.

Indik, B., Seashore, S. Effect of organization size on member attitudes and behavior. Ann Arbor: University of Michigan, Survey Research Center of the Institute for Social Research, 1961.

Ilgen, D. R. and Dugoni. Initial orientation to the organization: Its impact on psychological processes associated with the adjustment of new employees. Academy of Management, Kissimee, Fla., August, 1977.

Ilgen, D. R. and Seely, W. Realistic expectations as an aid in reducing voluntary resignations. Journal of Applied Psychology, 1974, 59, 452-455.

Ingham, G. Size of industrial organization and worker behavior. Cambridge: Cambridge University Press, 1970.

Ingham, Geoffrey K. 1967. Organization size, orientation to work and industrial relations, Sociology 1:239-58.

Inkson, J. H. K., J. P. Schwitter, D. C. Pheysey, and D. J. Hickson. 1970. A comparison of organization structure and managerial roles, Ohio, U.S.A., and Midlands, England, J. Management Studies 7:347-63.

Institute of Manpower Studies. 1972. A Comparative Study of Labor Wastage in 1970 (Brighton: Report to Civil Service Dept., Univ. Sussex, CN27).

Institute of Manpower Studies. 1973. Labor Wastage Bibliography (Brighton: Univ. Sussex).

International Labor Office. 1966. International Differences in Factors Affecting Labor Mobility (Geneva: Intern. Labor Office).

International Labor Review. 1960. Labor turnover-meaning and measurement, Intern. Labor Rev. 81:513-26.

Irzinski, Stanley M., and Kenneth W. Hylbert. 1970. Factors related to counselor turnover in the public programs, Rehabilitation Counseling Bull. 13:300-308.

Jehn, Chirstopher, Kleinman, Samuel, Shughart, William. The Use of Reenlistment Bonuses, ADB 008 573, Arlington, Virginia: Center for Naval Analyses, Institute of Naval Studies, May 9, 1975.

Johnson, T. W. and Graen, G. Organizational assimilation and role rejection. Organizational Behavior and Human Performance, 1973, 10, 72-87.

Kahn, R., Wolfe, D., Quinn, R., Snoek, J., Rosenthal, R. Organizational stress: Studies in role conflict and ambiguity. New York: Wiley, 1964.

Kahne, Merton J. 1968. Suicides in mental hospitals: A study of the effects of personnel and patient turnover, J. Health and Social Behavior 9:255-66.

Karp, H. B., Nickson, J. W., Jr. Motivator-hygiene deprivation as a predictor of job turnover. Personnel Psychology, 1973, 26, 377-384.

Katz, Aaron, and Rafacz, Bernard A. Impact of Increasing Preference Options in the Marine Corps, ADA 003 452, San Diego, California: Navy Personnel Research and Development Center, November, 1974. (NRPDC TR 75-12)

Kasarda, John D. 1973. Effects of personnel turnover, employee qualifications, and professional staff ratios on administrative intensity and overhead, Sociological Quart. 17:350-58.

Katz, Aaron and Schneider, Joseph. Prince Personnel Reactions to Incentives Naval Conditions and Experiences: A Longitudinal Research Study. Report No. 2: A Description of Recruits' Perceptions of Their Training, AD 745 312, Washington, D.C.: Washington Navy Yard, Naval Personnel Research and Development Laboratory, June 1972, WRR 72-8.

Katz, D., Maccoby, E., Gurin, G., Floor, L. Productivity, supervision and morale among railroad workers. Ann Arbor: University of Michigan, Survey Research Center, 1951.

Katz, D., Maccoby, N., Morse, N. Productivity, supervision and morale in an office situation. Ann Arbor: University of Michigan, Institute for Social Research, 1950.

Katzell, M. E. Expectations and dropouts in schools of nursing. Journal of Applied Psychology, 1968, 52, 154-157.

Katzell, Raymond A., Abraham K. Korman, and Edward L. Levine. 1971. Overview Study of the Dynamics of Worker Job Mobility (Washington, D.C.: Social and Rehabilitation Serv., US Dept. of HEW).

Kerr, W., Koppelmeier, G., Sullivan, J. Absenteeism, turnover and morale in a metals fabrication factory. Occupational Psychology, 1951, 25, 50-55.

Kilbridge, M. Turnover, absence, and transfer rates as indicators of employee dissatisfaction with repetitive work. Industrial and Labor Relations Review, 1961, 15, 21-32.

Kleinman, Samuel D. and Shughart, William F., II. The Effects of Reenlistment Bonuses, ADA 009 794, Arlington, Virginia: Center for Naval Analyses, Institute of Naval Studies, September, 1974.

Klotz, Benjamin P. "The Cost of ending the Draft: Comment, " The American Economic Review, 1971, 61, pp. 970-196.

Knowles, M. C. Personal and job factors affecting labor turnover. Personnel Practice Bulletin, 1964a, 20, 25-37.

Knowles, M. C. 1964b. A review of labor turnover research, Personnel Practice Bull. 20:25-37.

Knowles, M. C. 1965. A longitudinal study of labor turnover, Personnel Practice Bull. 21:6-17.

Koch, J. L. and Steers, R. M. Job Attachment, satisfaction, and turnover among public sector employees. Journal of Vocational Behavior, in press.

Kraut, A. I. Predicting turnover of employees from measured job attitudes. Organizational Behavior and Human Performance, 1975, 13, 233-243.

Kramer, Marlene, 1968. Nurse role deprivation: A symptom of needed change, Social Sci. Med. 2:461-74.

Kramer, Marlene. 1969. Collegiate graduate nurses in medical center hospitals: Mutual challenge or duel, Nursing Research 18:196-210.

Kramer, Marlene. 1974. Reality Shock (St. Louis: Mosby).

Kramer, Marlene, and Constance Baker. 1971. The exodus: Can we prevent it? J. Nursing Admin. 1:15-30.

LaRocco, James M., Gunderson, E. K., Pugh, William M. Prediction of Reenlistment: A Discriminant Analysis Approach, ADA 010 147, San Diego: Naval Health Research Center, March 1975.

La Rocco, J. M., Pugh, W. M., Gunderson, K. E. Identifying Determinants of Retention Decisions, Report Number 76-10, ADA 046431, San Diego, California, Naval Health Research Center, 1976

La Rocco, J. M., W. M. Pugh, A. P. Jones, K. E. Gunderson. Situational Determinants of Retention Decision, Report Number 77-3, ADA 046618, San Diego, California: Naval Health Research Center, November, 1977.

Ladinsky, Jack. 1967. Occupational determinants of geographic mobility among professional workers, Am. Sociol. Rev. 32:257-64.

Landau, Samuel B., Somer, Emanuel P., Lau, Alan W. An Approach for Investigating Turnover Behavior of Naval Personnel, San Diego, California, Navy Personnel Research and Development Center, August 1978.

Lane, K. F., and J. E. Andrew. 1955. A method of turnover analysis, J. Roy. Stat. Soc. Ser. A, Part 3, 118:296-323.

Larson, Emilie E. and Kristiansen, Donald M. Prediction of Disciplinary Offense Early In Army Service, AD 692 306, Arlington, Virginia: U.S. Army Behavioral Science Research Laboratory, April 1969, TR 210.

Lau, A. W. Personal and Organizational Determinants of Enlisted Attrition, TR 79-11, California: Navy Personnel Research and Development Center, San Diego, March 1979.

Lawler, E. E., III. Pay and organizational effectiveness: A psychological view. New York: McGraw-Hill, 1971.

Lawler, E. E., III. Motivation in work organizations. Calif: Brooks/Cole, 1973.

Lawler, E. E., III, Hackman, J. R. Impact of employee participation in the development of pay incentive plans: A field experiment. Journal of Applied Psychology, 1969, 53, 467-471.

Lawler, E. E., Hackman, J. R., and Kaufman, S. Effects of job redesign: A field experiment. Journal of Applied Psychology, 1973, 3, 49-62.

Lee, R., and Booth, J. M. A utility analysis of a weighted application blank designed to predict turnover for clerical employees. Journal of Applied Psychology, 1974, 59, 516-518.

Lefkowitz, Joel. 1967. How to Diagnose and Control Personnel Turnover (New York: BFS Psychological Associates).

Lefkowitz, Joel. 1971. Personnel turnover, Progress in Clinical Psychology, ed. L. E. Abt and B. F. Reiss (New York: Grune and Stratton).

Lefkowitz, J. and Katz, M. L. Validity of exit interviews. Personnel Psychology, 1969, 22, 445-455.

Levinson, Harry. 1968. The Exceptional Executive (Cambridge: Harvard University Press).

Lewellan, Wilbur G. 1968. Executive Compensation in Large Industrial Corporations (New York: Columbia University Press).

Ley, R. Labor turnover as a function of worker differences, work environment, and authoritarianism of foremen. Journal of Applied Psychology, 1966, 50, 497-500.

Life Office Management Association. 1968 Home Office Employee Terminations (New York: Personnel Admin., Rept. 37, Life Office Management Assoc.).

Life Office Management Association. 1970. Home Office Employee Terminations (New York: Personnel Admin., Rept. 47, Life Office Management Assoc.).

Likert, R.; Bowers, D. G. Organizational theory and human resource accounting. American Psychologist. 1969, 24.

Likert, R. L. New Patterns of Management, McGraw-Hill, 1961.

Likert, R. L. The Human Organization: Its Management and Values, McGraw-Hill, 1967.

Lindsay, William A., Jr., and Causey, Beverley D. A Statistical Model for the Prediction of Reenlistment, AD 684 908, McLean, Virginia: Research Analysis Corporation, March, 1969.

Locke, E. A. Personnel attitudes and motivation. Annual Review of Psychology, 1975, 26, 457-480.

Locke, E. A. The nature and consequences of job satisfaction. In M. D. Dunnette (Ed.) Handbook of Industrial and Organizational Psychology. Chicago: Rand - McNally, 1976.

Locke, E. A. Toward a theory of task motivation and incentives. Organizational Behavior and Human Performance, 1968, 3, 157-189.

Locke, E. A. What is job satisfaction. Organizational Behavior and Human Performances, 1969, 4, 309-336.

Lockman, Robert F., Stoloff, Peter H., Allbritton, A. Slagle. Motivational Factors in Accession and Retention Behavior, RC 201, Center for Naval Analysis, Arlington, Virginia, January 1972.

Lockman, Robert F. Chances of Surviving the First Year of Service: A New Technique for Use in Making Recruiting Policy and Screening Applicants for the Navy, CNS 1068, Arlington, Virginia: Center for Naval Analysis, November, 1975.

Lockman, Robert F. A Model for Predicting Recruit Losses, Professional Paper No. 163, Arlington, Virginia: Center for Naval Analyses, September, 1976.

Lockman, R. F. An Overview of the OSD/ONR Conference on First Term Enlisted Attrition. ADA 04361b, Arlington, Virginia, Center for Naval Analysis, June, 1977.

Long, Joyce R. 1951. Labor Turnover under Full Employment (Birmingham: Research Board, Faculty of Commerce and Social Science, Univ. Birmingham).

Lunden, Walter A. 1965. The Prison Warden and the Custodial Staff (Springfield: Charles C Thomas).

Lyons, T. Role clarity, need for clarity, satisfaction, tension and withdrawal. Organizational Behavior and Human Performance, 1971, 6, 99-110.

Lyons, Thomas F. 1968. Nursing Attitudes and Turnover (Ames: Industrial Relations Center, Iowa State Univ.).

Lyons, Thomas F. 1970. Reducing nursing turnover, Hospitals 44:74-80.

Lyons, Thomas F. 1971. Role clarity, need for clarity, satisfaction, tension, and withdrawal, Organizational Behavior and Human Performance 6:99-110.

Lyons, T. F. Turnover and absenteeism: A review of relationships and shared correlates. Personnel Psychology, 1972, 25, 271-287.

Macedonia, R. M. Expectation-press and survival. Unpublished doctoral dissertation, Graduate School of Public Administration, New York University, June 1969.

MacKinney, A. C., Wolins, L. Validity information exchange. Personnel Psychology, 1960, 13, 443-447.

Mackay, D. I., D. Boddy, J. Brack, J. A. Diack, and N. Jones. 1971. Labor Markets (London: George Allen).

Mandell, M. Recruiting and selecting office employees. New York: American Management Association, 1956.

Mangione, Thomas W. 1973. Turnover-Some psychological and demographic correlates, The 1969-1970 Survey of Working Conditions, ed. Robert P. Quinn and Thomas W. Mangione (Ann Arbor: Final Report to Employment Standards Admin., US Dept. Labor, Survey Research Center, Univ. Mich.).

March, J. G., and Simon, H. A. Organizations. New York: Wiley, 1958.

March, James G. (ed.). 1965. Handbook of Organizations (Chicago: Rand McNally).

Margione, T. W. Turnover - some psychological and demographic correlates. In R. P. Quinn and T. Q. Margione, The 1969-1970 survey of working conditions. Ann Arbor: U. Michigan Survey Research Center, 1973.

Marsh, R. and Mannari, H. Organizational commitment and turnover: A predictive study. Administrative Science Quarterly, 1977, 22 57-75.

Marsh, Robert M., and Hiroshi Mannari. 1971. Lifetime commitment in Japan: Roles, norms, and values, Am. J. Sociol. 76:795-812.

Marsh, Robert M., and Hiroshi Mannari. 1972. A new look at "lifetime commitment" in Japanese industry, Econ. Develop Cult. Change 20:611-30.

Martin, A. J., "Trends in DOD First Term Attrition," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 3-23.

Massell, Adele P. Reservation Wages and Military Reenlistments, ADA 026652, February, 1976. Distributed by National Technical Information Service, U.S. Dept. of Commerce.

Matthews, W. T., "Quality of Marine Test Scores, Personal Data, and Performance," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 419-474.

Mattila, J. Peter. 1974a. Job quitting and frictional unemployment, Am. Econ. Rev. 64:235-39.

Matilla, J. Peter. 1974b. Labor Turnover and Sex Discrimination (Ames: Industrial Relations Center, Iowa State Univ.).

Mayeske, G. W. The validity of Kuder Preference Record scores in predicting forester turnover and advancement. Personnel Psychology, 1964, 17, 207-210.

McCall, John and Wallace, Neil. "A Supply Function of First-Term Reenlistees to the Air Force," The Journal of Human Resources, IV, 3, pp. 293-310.

McDonald, Blair W. and Gunderson, E. K. Eric. "Correlates of Job Satisfaction in Naval Environments," Journal of Applied Psychology, 1974, Vol. 59, No. 3, 371-373.

McGee, Reece. 1971. Academic Janus (San Francisco: Jossey-Bass).

McLaughlin, Gerald W., Butler, Richard P. The Validity of Six Models of Job Satisfaction in Predicting Military Commitment and Retention, West Point, New York: United States Military Academy, June 1971.

McNeil, Kenneth, and James D. Thompson. 1971. The regeneration of social organization, Am. Sociol. Rev. 36:624-37.

Melbin, Murray, and Doris L. Taub. 1966 The high cost of replacing a nurse, Hospitals 40:112-22.

Merchants and Manufacturers Association. 1959. Labor Turnover (Los Angeles: Merchants and Manufacturers Assoc.).

Merton, Robert K. 1957. Social Theory and Social Structure (Glencoe: Free Press).

Merton, Robert K. 1969. Foreword, Allen H. Barton, Communities in Disaster (Garden City: Doubleday).

Metzner, H., Mann, F. Employee attitudes and absences. Personnel Psychology, 1953, 6, 467-485.

Meyer, H., Cuomo, S. Who leaves? A study of background characteristics of engineers associated with turnover. Crotonville, N.Y.: General Electric Company, Behavioral Science Research, 1962.

Meyer, Marshall M. (ed.). 1971. Structures, Symbols and Systems (Boston: Little Brown).

Mikes, P. S., Hulin, C. Use of importance as a weighting component of job satisfaction. Journal of Applied Psychology, 1968, 52, 394-398.

Minor, F. J. The prediction of turnover of clerical employees. Personnel Psychology, 1958, 11, 393-402.

Mirvis, P. H. and Lawler, E. E., III. Measuring the financial impact of employee attitudes. Journal of Applied Psychology, 1977, 62, 1-8.

Mischel, W. Introduction to personality. New York: Holt, Rinehart, and Winston, 1976.

Mitchell, T. R. Expectancy models of job satisfaction, occupational preference and effort: A theoretical, methodological, and empirical appraisal. Psychology Bulletin, 1974, 81, 1053-1077.

Mobley, W. H. Intermediate linkages in the relationship between job satisfaction and employee turnover. Journal of Applied Psychology, 1977, 62, 237-240.

Mobley, W. H., Griffith, R. W., Hand, H. H., Meglino, B. M. Review and Conceptual Analysis of the Employee Turnover Process, TR 4, Columbia, S. C. Center for Management and Organizational Research, University of South Carolina, December, 1977a.

Mobley, William H., Hand, Herbert H. and Logan, John E. "A Longitudinal Study of Enlisted Personnel Attrition in the U.S. Marine Corps: Preliminary Recruit Training Results," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977b, pp.155-203.

Mobley, W. H., Horner, S. O. and Hollingsworth, A. T. An evaluation of precursors of hospital employee turnover. Journal of Applied Psychology, (in press).

Moffatt, G. W. B., and Kate Hill. 1970. Labor turnover in Australia - A review of research, Part 1, Personnel Practice Bull. 26:142-49.

Morgan, L. G., and Herman, J. B. Perceived consequences of absenteeism. Journal of applied Psychology, 1976, 61, 738-742.

Moskcs, Charles C. 1970. The American Enlisted Man (New York: Russell Sage).

Mueller, Ernest H. 1969. The relationship between teacher turnover and student achievement, (unpublished Ph.D. dissertation, School of Education, Univ. Va.).

Mumford, S. W. Human Resource Management and Operational Readiness as Measured by Refresher Training on Navy Ships. San Diego: NPRDC, February 1976, TR 76-32.

Musgrave, P. W. 1967. Technical Change, the Labor Force and Education (Oxford: Pergamon).

National Education Association. 1966. Selected Statistics of Local School Systems, 1963-64 (Washington, D.C.: NEA).

National Opinion Research Center (Andrew M. Greeley and Richard A. Schoenherr, co-investigators). 1972. The Catholic Priest in the United States (Washington, D.C.: US Catholic Conf.).

NAVPERS 15264, Survey-Guided Development: A Consultant Manual for Human Resource Management Specialists, Bureau of Naval Personnel, Department of the Navy, November 1974.

Navy Times, "'Shortfall' is Key Word in Navy Personnel Talk", Paul Smith, March 19, 1979, p 34.

Navy Times, "Retention Study Lists Top Five Gripes", Rosmary Purcell, April 23, 1978, p 18.

Naylor, J. E., Vincent, N. L. Predicting female absenteeism. Personnel Psychology, 1959, 12, 81-84.

Nelson, Gary R. An Economic Analysis of First-Term Reenlistment In the Army, AD 711 609, Arlington, Virginia: Institute for Defense Analyses, June 1970.

Nelson, Paul D. and Berry, Newell H. Attitudes of Marines During First Enlistment, Technical Report Number 66-21, San Diego, California: U.S. Navy Medical Neuropsychiatric Research Unit, May, 1966.

Newman, J. E. Predicting absenteeism and turnover: A field comparison of Fishbein's model and traditional job attitude measures. Journal of Applied Psychology, 1974, 59, 610-615.

Newman, J. E. Understanding the organizational structure-job attitude relationship through perceptions of the work environment, Organizational Behavior and Human Performance, 1975, 14, 371-397.

Nicholson, H., Brown, C. A., and Chadwick-Jones, J. K. Absence from work and job satisfaction. Journal of Applied Psychology, 1976, 61, 728-737.

Nie, N. H.; Hull, C. H.; Jenkins, J. G.; Steinbrenner, K.; Bent, D. H. Statistical Package for the Social Sciences, Second Edition, McGraw-Hill Book Company, 1975.

Office of Personnel Operation (Army). Sample Survey of Military Personnel (RSC AG-366) as of 31 May 1969. Survey Estimate of Retention of Army Personnel, AD-A009 787, Washington: Office of Personnel Operations, 31 May 1969.

Office of State Merit Systems. 1968. Analysis of Appointments, Separations, Promotions. US Dept. HEW.

Oi, Walter Y. "The economic Cost of the Draft," American Economic Review, 1967, 57 pp. 39-62.

O'Reilly, C. A., III and Roberts, K. H. Individual differences in personality, position in the organization and job satisfaction. Organizational Behavior and Human Performance, 1975, 14, 144-150.

Organization for Economic Co-operation and Development. 1965 Wages and Labor Mobility (Paris:OECD).

Pallone, Nathaniel J., Fred S. Rickard, and Robert B. Hurley. 1971. Job Satisfaction research of 1966-67, Personnel and Guidance J. 48:469-78.

Parker, John E., and John F. Burton. 1968 Voluntary labor mobility in the U.S. manufacturing sector, Proc. 20th Ann. Winter Meet. Industrial Relations Res. Assoc., ed. Gerald Sommers. pp. 61-70.

Parsons, Donald O. 1973. Quit rates over time: A search and information approach, Am. Econ. Rev. 63:390-401.

Patchen, M. Absence and employee feelings about fair treatment. Personnel Psychology, 1960, 13, 349-360.

Pencavel, John H. 1970. An Analysis of the Quit Rate in American Manufacturing Industry (Princeton: Industrial Relations Section, Dept. Econ., Princeton Univ.).

Pencavel, John H. 1972. Wages, specific training and labor turnover in U.S. manufacturing industries, Intern. Econ. Rev. 13:53-64. Petersen, William. 1969. Population (New York: Macmillan).

Pettman, B. D. Some factors influencing labor turnover: A review of the literature. Industrial Relations Journal, 1973a, 4, 43-61.

Pettman, B. O. 1973b. Wastage Analysis: A Selected International and Temporal Bibliography (Hull: Emmasglen).

Pettman, Barrie O. (ed.). 1975. Labor Turnover and Retention (Epping: Gower).

Plag, J. A. Predicting the Military Effectiveness of Enlistees in the U.S. Navy, AD 700 875, San Deigo, California: Navy Medical Neuropsychiatric Research Unit, 1969, TR 69-23.

Plag, John A., Goffman, Jerry M. and Phelan, James D. Predicting the Effectiveness of New Mental Standards Enlistees in the U.S. Marine Corps, TR 71-42, San Diego, California: Navy Medical Neuropsychiatric Research Unit, December, 1970.

Plag, John A., Wilkins, Walter L. and Phelan, James D. Strategies for Predicting Adjustment of AFOT Category IV Navy and Marine Corps Personnel, TR 68-28, San Deigo, California: Navy Medical Neuropsychiatric Research Unit, October, 1968.

Pomeroy, Richard, and Harold Yahr. 1967. Studies in Public Welfare (New York: Center for Study of Urban Problems, Graduate Div., Bernard M. Baruch College, City Univ. New York).

Porter, L. W., Crampon, W. J. and Smith, F. J. Organizational commitment and managerial turnover: A longitudinal study. Organizational Behavior and Human Performance, 1976, 15, 87-98.

Porter, L. W., Lawler, E. E., III. Properties of organization structure in relation to job attitudes and job behavior. Psychological Bulletin, 1965, 64, 23-51.

Porter, L. W., Lawler, E. E., III. Managerial attitudes and performance. Homewood, Ill.: Irwin, 1968.

Porter, L. W. and Steers, R. M. Organizational, work, and personal factors in employee turnover and absenteeism. Psycholoical Bulletin, 1973, 80, 151-176.

Porter, L. W., Steers, R. M., Mowday, R. T., and Bouliars, P. V. Organizational Commitment, job satisfaction, and turnover among psychiatric technicians. Journal of Applied Psychology, 1974, 59, 603-609.

Price, J. L. The Study of Turnover, Ames: Iowa State Press, 1977.

Price, J. L. The measurement of turnover. Industrial Relations Journal, 1975-1976, 6, 33-46.

Price, J. L. The study of turnover, Ames: Iowa State University Press, 1977.

Price, James L. 1967. Annotated Bibliography of Federal Government Publications Presenting Data about Organizations (Iowa City: Center for Labor and Management, College of Business Admin., Univ. Iowa).

Price, James L. 1968. Organizational Effectiveness (Homewood: Irwin).

Price, James L. 1972a. Handbook of Organizational Measurement (Lexington: D. C. Heath).

Price, James L. 1972b. The study of organizational effectiveness, Sociological Quart. 13:3-15.

Price, J. L. and Bluedorn, A. C. Test of a Casual Model of Organizational Turnover, Iowa City, Iowa: University of Iowa, November, 1977.

Quigley, John M., and Wilburn, Robert C., An Economic Analysis of First Term Reenlistment in the Air Force, AD 697 810, Washington, D.C.: Directorate of Personnel Planning (Air Force), September, 1969.

Quinn, Robert F., Graham L. Staines, and Margaret R. McCullough. 1974. Job Satisfaction: Is There a Trend? (Washington, D.C.: USGPO).

Revans, R. Human relations, management and size. In E. M. Hugh-Jones (Ed.), Human relations and modern management. Amsterdam: North Holland Publishing, 1958.

Rice, A. K. and Trist, E. L. Institutional and sub-institutional determinants of change in labor turnover. Human Relations, 1952, 5, 347-372.

Rice, Robert G. 1966. Skill, earnings, and growth of wage supplements, Am. Econ. Rev. 61:583-93.

Richardson, Bellows, Henry Co., Inc. The Feasibility of the Use of Autobiographical Information as a Predictor of Early Army Attrition, Washington, D.C.: Richardson Bellows, Henry Co. May, 1976.

Robinson, D. D. Prediction of clerical turnover in banks by means of weighted application blank. Journal of Applied Psychology, 1972, 56, 282.

Robinson, Derek. 1967. Myths of the labor market, Personnel 1:36-39.

Robinson, Derek. 1968. Wage Drift, Fringe Benefits, and Manpower Distribution (Paris: OECD).

Robinson, W. S. Ecological correlations and the behavior of individuals. American Sociological Review, 1950, 15, 351-357.

Ronan, W. W. A study of some concepts concerning labour turnover. Occupational Psychology, 1967, 41, 193-202.

Ronan, W. W., Lathan, G. P. and Kinne, S. B., III. Effects of goal setting and supervision on worker behavior in an industrial situation. Journal of Applied psychology, 1973, 58, 302-307.

Ross, I. C., Zander, A. Need satisfaction and employee turnover. Personnel Psychology, 1957, 10, 327-338.

Russell, J. C. 1968. Labor turnover and absence: Effect of location and size of undertaking, Personnel Practice Bull. 24:28-36.

Ryan, T. A. Intentional Behavior: An approach to human motivation. New York: Ronald Press, 1970.

Saleh, S. D., Lee, R. J. and Prien, E. P. Why nurses leave their jobs - An analysis of female turnover. Personnel Administration, 1965, 28, 25-28.

Sands, William A. Development of a Revised Odds for Effectiveness (OFE) Table for Screening Male Applicants for Navy Enlistment, (NPRDC Tn 76-5), San Diego, California: Navy Personnel Research and Development Center, April, 1976.

Scheer, Wilbur E. 1962. Reduce turnover - increase profits, Personnel J. 41:559-61.

Schefflen, K. C., Lawler, E. E., III, Hackman, J. R. Long-term impact of employee participation in the development of pay incentive plans: A field experiment revisited. Journal of Applied Psychology, 1971, 55, 182-186.

Schneider, B. Organizational climates: An essay. Personnel Psychology, 1975, 28, 447-479.

Schneider, B. Organizational climate: Individual preferences and organizational realities revisited. Journal of Applied Psychology, 1975, 60, 459-465.

Schneider, Joseph. Prince: (Personnel Reactions to Incentives, Naval Conditions and Experiences): A Longitudinal Research Study. Report No. 4: The Grass is Greener: A Comparison of the Navy Work Environment With A Major Alternative, AD-761 612, Washington, D.C: Naval Personnel Research and Development Laboratory, May 1973, TR73-28.

Schneider, Joseph. "The 'Greener Grass' Phenomenon: Differential Effects of a Work Context Alternative on Organizational Participations and Withdrawal Intentions," Organizational Behavior and Human Performance, 1976, 16, 308-333.

Schneider, Joseph, and Katz, Aaron, Prince (Personnel Reactions to Incentives, Naval Conditions and Experiences) A Longitudinal Research Study. Report Number 3: Measurement of Attitude Change During Recruit Training, AD-756 632, Washington, D.C.: Naval Personnel Research and Development Laboratory, January, 1973, WTR 73-11.

Schoenherr, Richard A., and Andrew M. Greeley. 1974. Role commitment process and the American Catholic priesthood, Am. Sociological Rev. 39:407-26.

Schuh, A. J. The predictability of employee tenure: A review of the literature. Personnel Psychology, 1967, 20, 133-152.

Schwab, D. P. and Oliver, R. L. Predicting tenure with biographical data: Exhuming buried evidence. Personnel Psychology, 1974, 27, 125-128.

Scott, R. D. Job expectancy - an important factor in labor turnover. Personnel Journal, 1972, May, 360-363.

Scott, W. Richard. 1970. Social Processes and Social Structures (New York: Holt, Rinehart and Winston).

Seegal, David R. and Bachman, Jerald G. "Post High School Dropouts (and Stayers)," in Sinaiko, H. Wallace, editor, First Term Enlisted Attrition. Washington, D.C.: Smithsonian Institution, 1977, pp. 113-1269

Shenk, Faye Changes in Career Intent During Initial Tour of Active Duty, AFHRL - TR - 70 - 49. Texas, Lackland Air Force Base, December 1970.

Shenk, Faye, and James M. Wilbourn. 1971. Officer Attitudes Related to Career Decisions (Springfield: Nat. Tech. Inf. Serv., AD-744 038).

Shields, R. M. and Walls, R. G. Naval Aviation Squadron Maintenance Performance and the Human Resource Management Survey: Relationships and Indications for Improved Productivity. Pearl Harbor, Hawaii, Human Resource Management Center, Technical Report, January 1978.

Shott, G. L., Albright, L. W., Glennon, J. R. Predicting turnover in an automated office situation. Personnel Psychology, 1963, 16, 213-219.

Sinaiko, H. W., Memorandum Re: Navywide Retention Conference, Aug 22-25, 1978, October, 1978 4 Oct 1978 8 pgs.

Singer, Arnold, and Anton S. Morton. 1969. A study of enlisted navy retention, Personnel Psychology 22:19-31.

Singer, Carmella 1970. Labor turnover rates - An international comparison, Personnel Practice Bull. 26:109-14.

Sinha, A. K. P. Manifest anxiety affecting industrial absenteeism. Psychological Reports, 1963, 13, 258.

Skinner, E. Relationships between leadership behavior patterns and organizational situational variables. Personnel Psychology, 1969, 22, 489-494.

Smith, J. H. 1966. The analysis of labor mobility, Manpower Policy and Employment Trends, ed. B. C. Roberts and J. H. Smith (London: Bell).

Smith, P. C., Kendall, L. M., and Hulin, C. L. The measurement of satisfaction in work and retirement. Chicago: Rand-McNally, 1969.

Sorensen, James E., John G. Rhode, and Edward E. Lawler. 1973. The generation gap in public accounting, J. Accountancy 136:42-50.

Speed, James G., LCDR, U.S.N. Fleet Management Performance Analysis - Retention, P 1160/1 (New 8/78), Human Resource Management Center - Norfolk, July 1978.

Steers, R. M. Antecedents and outcomes of organizational commitment. Administrative Science Quarterly, 1977, 22, 46-56.

Stogdill, R., Coons, A. (Eds.) Leader behavior: Its description and measurement. Columbus: Ohio State University, Bureau of Business Research, 1957.

Stoikov, Vladimir, and Robert L. Raimon. 1968. Determinants of differences in the quit rate among industries, Am. Econ. Rev. 58:1283-98.

Stoloff, Peter H. An Exploratory Study of Job Satisfaction, Retention, and Performance of Navy Enlisted Men, AD 723 559, Arlington: Center for Naval Analyses, Institute of Naval Studies, February, 1971.

Stoloff, Peter H., Lockman, R. F., Allbritton, A. S., and McKinley, Jr., H. H., An Analysis of First-Term Reenlistment Intentions, AD-784 971 Arlington: Center for Naval Analyses, November, 1972, CRC232.

Stone, T. H., Athelstan, G. T. The SVIB for women and demographic variables in the prediction of occupational tenure. Journal of Applied Psychology, 1969, 53, 408-412.

Taguiri, R.; Litwin, G. H. (eds.) Organizational Climate, Harvard University Press, 1968.

Talacchi, S. Organization size, individual attitudes and behavior: An empirical study. Administrative Science Quarterly, 1960, 5, 398-420.

Tannenbaum, Arnold S. 1966. Social Psychology of the Work Organization (Belmont: Wadsworth).

Taylor, J. C. ; Bowers, D. G. Survey of Organizations: A Machine-scored Standardized Questionnaire Instrument, Institute for Social Research, 1972.

Taylor, Kenneth E., and David J. Weiss. 1972. Prediction of individual job termination from measured job satisfaction and biographical data, J. Vocational Behavior 2:123-32.

Taylor, K., Weiss, D. Prediction of individual job termination from measured job satisfaction and biographical data. (Research Report No. 30) Minneapolis: University of Minnesota, Work Adjustment Project, October 1969.

Taylor, K., Weiss, D. Prediction of individual job turnover from measured job satisfaction. (Research Report No. 22) Minneapolis: University of Minnesota, Work Adjustment Project, May 1969.

Teberg, David T. Racial Attitudes and Their Effect on the Retention of Enlisted Personnel in the Army, AD-764 803, Pennsylvania: Army War College, 8 March 1972.

Telly, C. S., French, W. L., Scott, W. G. The relationship of inequity to turnover among hourly workers. Administrative Science Quarterly, 1971, 16, 164-172.

Thibaut, J. W., Kelley, H. H. The social psychology of groups. New York: Wiley, 1959.

Torrence, E. Paul. 1965. Some consequences of power differences on decision making in permanent and temporary three-man groups, Small Groups, ed. A. P. Hare, E. F. Borgatta, and R. F. Bales (New York: Knopf).

Tuchi, Ben J., and Barry E. Carr. 1971. Labor turnover, Hospitals 45:88-92.

Turner, A. N., Lawrence, P. R. Industrial jobs and the worker: An investigation of response to task attributes. Boston: Harvard University Press, Division of Research, 1965.

UK National Economic Development Office. 1967. A Study of Labor Turnover (London: HMSO).

UK National Economic Development Office. 1969. Staff Turnover (London: HMSO).

Ulman, Lloyd. 1965. Labor mobility and the industrial wage structure in the postwar United States, Quart. J. Econ. 79:73-97.

United Fund of New York. 1968. Analyzing and Reducing Employee Turnover in Hospitals (New York: Training, Research and Special Studies Div., United Fund of New York).

US bureau of the Census. 1962, 1965, 1970, and 1974. Statistical Abstract of the United States. US Dept. Commerce.

US Bureau of Labor Statistics. 1965. Employment and Earnings for the United States, 1909-1965. US Dept. Labor.

US Bureau of Labor Statistics. 1966. Measurement of labor turnover (Unpublished study, US Dept. Labor).

US Bureau of Labor Statistics. 1967a. Facts about women's absenteeism and labor turnover (Unpublished study, US Dept. Labor).

US bureau of Labor Statistics. 1967b. Major BLS Programs. US Dept. Labor.

US Bureau of Labor Statistics. 1972. Technical note, Employment and Earnings 19:118-29.

US Bureau of Labor Statistics. 1974. Handbook of Labor Statistics. US Dept. Labor.

US Civil Service Commission. 1965, 1966, 1967, 1968, 1970, 1971, 1973. Current Federal Workforce Data as of December, 1964; June and December, 1965; June, 1966; December, 1966 and June, 1967; December, 1967 and June, 1968; December, 1968 and June, 1969; and Fiscal Years 1970, 1971, and 1972.

US Civil Service Commission. Federal Employment Statistics Bulletin. The statistics in this series run through March 1967.

US Civil Service Commission. Federal Civilian Manpower Statistics. The statistics in this series begin in April 1967.

Uyeki, Eugene S. 1960. Draftee behavior in the cold-war army, Social Problems 8:151-58.

Valenzi, E. R., and I. R. Andrews. 1971. Effect of hourly overpay and underpay inequity when tested with a new induction procedure, J. Appl. Psychol. 55:22-27.

Van der Merwe, Roux, and Sylvia Miller. 1970. Labor Turnover in the South African Footwear Industry (Grahamston: Leather Industries Res. Inst., Res. Bull. 535).

Van der Merwe, Roux, and Sylvia Miller. 1971. The measurement of labor turnover, Human Relations 24:233-53.

Van der Merwe, Roux, and Sylvia Miller. 1973. Near-terminal labor turnover: An analysis of a crisis situation, Human Relations 26:415-32.

Vroom, V. H. Work and motivation. New York: Wiley, 1964.

Wales, Terence J. 1970. Quit rates in manufacturing industries in the United States, Can J. Econ. 3:123-39.

Walker, C. R., Guest, R. H. The man on the assembly line. Cambridge: Harvard University Press, 1952.

Walters, L. K., Roach, D. Relationship between job attitudes and two forms of withdrawal from the work situation. Journal of Applied Psychology, 1971, 55, 92-94.

Wanous, J. P. Effects of a realistic job preview on job acceptance, job attitudes, and job survival, Journal of Applied Psychology, 1973, 58, 327-332.

Wanous, J. P. Organizational entry: Newcomers moving from outside to inside. Psychological Bulletin, 1977, 84, 601-618.

Waters, L. K. Roach, D. Job attitudes and predictors of termination and absenteeism: Consistency over time and across organizational units. Journal of Applied Psychology, 1973, 57, 341-342.

Waters, L. K., and Darrell Roach. 1971. Relationship between job attitudes and two forms of withdrawal from the work situation, J. Appl. Psychol. 55:92-94.

Waters, L. K., Roach, D., Waters, C. W. Estimate of future tenure, satisfaction, and biographical variables as predictors of termination. Personnel Psychology, 1976, 29, 57-60.

Wattenberg, Ben J., and Richard M. Scammon. 1965. This U.S.A. (Garden City: Doubleday).

Weitz, J. Job expectancy and survival. Journal of Applied Psychology, 1956, 40, 245-247.

Weitz, J., Nickols, R. C. Job satisfaction and job survival, Journal of Applied Psychology, 1955, 39, 294-300.

Wells, Wallace P., and Donald C. Pelz. 1966. Groups, Scientists in Organization, ed. Donald C. Pelz and Frank Andrews (New York: Wiley).

Wieland, George F. 1969. Hospitals and social research: A review of research relevant to management, World Hospitals 4:201-5.

Wieland, George F. 1969. Studying and measuring nursing turnover, Intern. J. Nursing Studies 6:61-70.

Wild, Ray, and A. B. Hill. 1970. Women in the Factory (London: Inst. Personnel Management).

Wild, R. Job needs, job satisfaction, and job behavior of women manual workers. Journal of Applied Psychology, 1970, 54, 157-162.

Wiskoff, Martin F. Review of Career Expectations Research: Australia, Canada, United Kingdom, and United States, Technical Note 77-9, San Diego, California: Navy Personnel Research and Development Center, March 1977.

Wiskoff, Martin F. Review of Career Expectations Research: Australia, Canada, United Kingdom, and United States, San Diego, California: Navy Personnel Research and Development Center, December, 1976. Technical Note 77-9.

Woodward, N. The economic causes of labour turnover: A case study. Industrial Relations Journal, 1975-1976, 6, 19-32.

Wright, Stuart. 1957. Turnover and job satisfaction, Hospitals 31:47-52.

Yellen, Ted M. I. Validation of the Delinquent Behavior Inventory As A Predictor of Basic Training Attrition, ADA 015 281, California: Navy Personnel Research and Development Center, August, 1975, TR 76-3.

Young, Andrew. 1969. The remuneration of University Teachers, 1967-1968 (London: Assoc. Univ. Teachers).

Young, Andrew. 1971. Demographic and ecological models for manpower planning, Aspects of Manpower Planning, ed. D. J. Bartholomew and B. R. Morris (London: English Univ.).

Youngberg, C. F. An experimental study of "job satisfaction" and turnover in relation to job expectancies and self expectations. Unpublished doctoral dissertation, New York University, 1963.

Zetterberg, Hans L. 1965. On Theory and Verification in Sociology (Totowa: Bedminster).

The following entries are pre-1970 and are included to provide researchers additional information regarding turnover and related topics.

American Nurses' Association. 1954. Spot Checks of Nursing in Non-Federal General Hospitals (Kansas City: Research and Statistics Unit, American Nurses' Association).

American Nurses' Association. 1962. Spot Check of Current Hospital Employment Conditions (Kansas City: Research and Statistics Unit, American Nurses' Association).

Andrew, J. E. 1957. Measuring labor stability and its application to employment recruitment, Proc. Business and Economics Statistics Section, 17th Ann. Meet. Am. Stat. Assoc., Washington, D.C., pp.450-64.

Argyris, Chris. 1960. Understanding Organizational Behavior (Hmcewood: Dorsey).

Argyris, Chris. 1957. Personality and Organization (New York: Harper).

Association of Casualty and Surety Companies. 1962. Survey on Employee Turnover (New York: Research Dept., Association of Casualty and Surety Companies).

Association of Casualty and Surety Companies. 1964. Employee Turnover (New York: Research Dept., Association of Casualty and Surety Companies).

Baldamus, W. 1951. Type of work and motivation. Brit J. Sociol. 2:44-58.

Barber, Bernard. 1957. Social Stratification (New York: Harcourt).

Bartholomew, D. J. 1959. Note on the measurement and prediction of labor turnover, J. Roy. Stat. Soc., Ser. A, Part 2, 122:232-39.

Behrend, Hilde. 1953. Absence and labor turnover in a changing economic climate, Occupational Psychol. 27:69-79.

Behrend, Hilde. 1955. Normative factors in the supply of labor, Manchester School of Economics and Social Studies 23:62-76.

Belknap, Ivan. 1956. Human Problems of a State Mental Hospital (New York: McGraw-Hill).

Bell, Evelyn M. 1961. Polygons (Salisbury: Dept. African Studies, Univ. College of Rhodesia and Nyasaland, Occasional Paper No. 2).

Bell, Evelyn M. 1963. Polygons (Salisbury: Dept. African Studies, Univ. College of Rhodesia and Nyasaland, Occasional Paper No. 3).

Bennis, W. G., N. Berkowitz, M. Affinito, and M. Malone. 1958a. Reference groups and loyalties in the out-patient department, Admin. Sci. Quart. 2:481-500.

Bennis, W. G., N. Berkowitz, M. Affinito, and M. Malone. 1958b. Authority, power, and the ability to influence, Human Relations 11:143-55.

Blalock, Hubert M., Jr. 1960. Social Statistics (New York: McGraw-Hill).

Blau, Peter M. 1955. The Dynamics of Bureaucracy (Chicago: University of Chicago Press).

Blau, Peter M. 1957. Formal organization: Dimensions of analysis, Am. J. Sociol. 63:58-69.

Blau, Peter M. 1959-60. Social integration, social rank, and processes of interaction, Human Organization 18:152-57.

Blau, Peter M. 1960. A theory of social integration, Am. J. Sociol. 65:545-56.

Blau, Peter M. 1973. The Organization of Academic Work (New York: Wiley).

Blau, Peter M., and Marshall W. Meyer. 1971. Bureaucracy in Modern Society (New York: Random House).

Blau, Peter M., and Richard A. Schoenherr. 1971. The Structure of Organizations (New York: Basic Books).

Blau Peter M., and W. Richard Scott. 1962. Formal Organizations (San Francisco: Chandler).

Brissenden, P. F., and E. Frankel. 1922. Labor Turnover in Industry (New York: Macmillan).

Bucklow, Maxine, 1963. Labor turnover-A reassessment, J. Ind. Relations 5:29-37.

Burling, Temple, Edith Lentz, and Robert N. Wilson. 1956. The Give and Take in Hospitals (New York: Putnam).

Byrt, W. J. 1948. Some facts on labor turnover, Ind. Psychology and Personnel Practice 4:16-27.

Byrt, W. J. 1957. Methods of measuring labor turnover, Personnel Practice Bull. 13:6-14.

Canfield, Grant W. 1959. How to compute your labor turnover costs, Personnel J. 37:413-17.

Caplow, Theodore. 1954. Sociology of Work (New York: McGraw-Hill).

Caplow, Theodore, and Reece J. McGee. 1958. The Academic Marketplace (New York: Basic Books).

Charters, W. W. 1954. The effects of shcool district reorganization upon teacher turnover in Illinois high schools (unpublished, Bur. Ed. Res., Univ. Ill.).

Charters, W. W. 1955. The sociological implications of teacher turnover (unpublished, Bur. Ed. Res., Univ. Ill.).

Charters, W. W. 1956. A note on school size and rates of principal turnover (unpublished, Bur. Ed. Res., Univ. Ill.).

Charters, W. W. 1964. Research in Teacher Mobility (Cambridge: Center for Research in Careers, Graduate School of Education, Harvard Univ.). .

Christensen, C. Roland. 1953. Management Succession in Small and Growing Enterprises (Boston: Div. Research, Graduate School of Business, Harvard Univ.).

Claque, Ewan. 1956. Long-term trends in quit rates, Employment and Earnings 3:iii-ix.

Cook, P. H. 1951. Labor turnover research, Personnel 31:2-9.

Cornoq, Geoffrey Y. 1957. The personnel turnover concept: A reappraisal, Public Admin. Rev. 17:247-56.

Corwin, Ronald G. 1961. Role conception and career aspiration: A study of identity in nursing, Sociological Quart. 2:69-86.

Dahrendorf, Ralf. 1959. Class and Class Conflict in Industrial Society (Stanford: Stanford University Press).

Diamond, Lorraine K., and David J. Fox. 1958. Turnover among hospital staff nurses, Nursing Outlook 6:388-91.

Dubin, Robert (ed.). 1951. Human Relations in Administration (New York: Prentice-Hall).

Duncan, David C. 1955. A new method of recording labor losses, The Manager 23:30-35.

Etzioni, Amitai. 1961 A Comparative Analysis of Complex Organizations (New York: Free Press).

Fainsod, Merle. 1963. How Russia Is Ruled (Cambridge: Harvard University Press).

Gamson, William A., and Norman A. Scotch. 1964. Scapegoating in baseball, Am. J. Sociol. 70:69-72.

Ghiselli, E. E., and R. P. Barthol. 1953. The validity of personality inventories in the selection of employees, J. Appl. Psychol. 37:18-20.

Goode, William J. 1960. Encroachment, charlatanism, and the emerging profession, Am. Sociol. Rev. 25:902-14.

Gouldner, Alvin W. 1952. The problem of succession in bureaucracy, Reader in Bureaucracy, ed. Robert J. Merton, Ailsa P. Gray, Earbara Hockey, and Hanan C. Selvin (Glencoe: Free Press).

Gouldner, Alvin W. 1954. Patterns of Industrial Bureaucracy (Glencoe: Free Press).

Gouldner, Alvin W. 1957. Cosmopolitans and locals: Toward an analysis of latent social roles-I, Admin. Sci. Quart. 2:281-306.

Gouldner, Alvin W. 1958. Cosmopolitans and locals: Toward an analysis of latent social roles-II. Admin. Sci. Quart. 2:444-80.

Greystoke, J. R., G. P. Thomason, and T. J. Muphy. 1952. Labor turnover surveys, Personnel Management 34:158-65.

Grusky, Oscar. 1959. Role conflict in organization: A study of prison camp officials, Admin. Sci. Quart. 3:452-72.

Grusky, Cscar. 1960. Administrative succession in formal organizations, Social Forces 39:105-15.

Grusky, Cscar. 1963. Managerial succession and organizational effectiveness, Am. J. Sociol. 69:21-31.

Guest, Robert H. 1962a. Managerial succession in complex organizations, Am. J. Sociol. 68:47-56.

Guest. Robert H. 1962b. Organizational Change (Homewood: Irwin).

Harris, Mary. 1964. The social aspects of labor turnover in the U.S.S.R., Brit J. Ind. Relations 2:398-417.

Hartshorne, E. Y. 1940. Metabolism indices and the annexation of Austria: A note on method. Am. J. Sociol. 65:899-917.

Hedberg, Magnus. 1960. The turnover of labor in industry: An actuarial study, Acta Sociologica 5:129-43.
Hill, J. M. M. 1952. Approach to labor turnover, The Engineer 197:306-9.

Hill, J. M. M., and E. L. Trist. 1962. Industrial Accidents, Sickness, and Other Absences (London: Tavistock Inst. Human Relations).

Hill, T. P. 1962. Wages and labor turnover, Bull. Oxford Univ. t. Statist. 24:185-233.

Hyman, Herbert H. 1955. Survey Design and Analysis (Glencoe: Free Press).

Jaffe, A. J. 1961. The calculation of death rates for establishments with supplementary notes on the calculation of birth rates, Estadistica 19:513-26.

Katzell, Raymond A., Richard S. Barrett, and Treadway C. Parker. 1961. Job satisfaction, job performance and situational characteristics, J. Appl. Psychol. 45:65-72.
Kaufman, Herbert. 1960. The Forest Ranger (Baltimore: Johns Hopkins University Press).

Kendall, Patricia L., and Paul F. Lazarsfeld. 1950. Problems of survey analysis, Continuities in Social Research, ed. Robert K. Merton and Paul F. Lazarsfeld (Glencoe: Free Press).

Kitscn, H. D. 1925. Psychology of Vocational Adjustment (New York: Lippincott).

Landsberger, Henry A. 1958. Hawthorne Revisted (Ithaca: Cornell University Press).

Levine, Eugene. 1957. Turnover among nursing personnel in general hospitals, Hospitals 31:50-53, 138, 140.

Levine, Eugene, and Stuart Wright. 1957. New ways to measure personnel turnover in hospitals, Hospitals 31:38-42.

Lindenfeld, Frank. 1963. Teacher Turnover in Public Elementary and Secondary Schools, 1959-1960 (Washington, D.C.: USGPO).

Lipset, Seymour M., Martin T. Trow, and James S. Coleman. 1956. Union Democracy (Glencoe: Free Press).

McCleery, Richard H. 1957. Policy Change in Prison Management (East Lansing: Bur. Social and Political Res., College of Business and Public Serv., Mich. State Univ.).

Marshall, Howard D. 1964. The Mobility of College Faculties (New York: Pageant).

Mason, P. L. 1962. An application of Silcock's method of examining labor turnover, Personnel Practice Bull. 18:13-17.

Mason, Ward S., and Robert K. Bain. 1959. Teacher Turnover in the Public Schools, 1957-1958 (Washington, D.C.: USGPO).

Mayo, Elton. 1924. Revery and industrial fatigue. Personnel J. 8:273-81.

Mayo, Elton. and George F. F. Lombard. 1944. Teamwork and Labor Turnover in the Aircraft Industry of Southern California (Boston: Graduate School of Business Admin., Harvard Univ.).

Merton, Robert K., and Alice S. Kitt. 1950. Contributions to the theory of reference group behavior, Continuities in Social Research, ed. Robert K. Merton and Paul F. Lazarsfeld (Glencoe: Free Press).

Merton, Robert K., Alisa P. Gray, Barbara Hockey, and Hanan C. Selvin (eds.). 1952. Reader in Bureaucracy (Glencoe: Free Press).

Mosher, William E., J. Donald Kingsley, and O. Glenn Stahl. 1950. Public Personnel Administration (New York: Harper).

National Education Association. 1957. Teacher Supply and Demand in Colleges and Universities, 1955-56 and 1956-57 (Washington, D.C.: NEA).

Parnes, Herbert S. 1954. Research on Labor Mobility (New York: Social Science Research Council).

Parnes, Herbert S. 1964. Labor force mobility, Lectures and Methodological Essays on Educational Planning (Paris: Directorate for Scientific Affairs, OECD).

Parsons, Talcott. 1949. The Structure of Social Action (Glencoe: Free Press).

Parsons, Talcott. 1954. Essays in Sociological Theory (Glencoe: Free Press).

Pearce, Frank T. 1954. Financial Effects of Labor Turnover (Birmingham: Res. Board, Faculty of Commerce and Social Science, Univ. Birmingham).

Revans, R. W. 1964. Standards for Morale (London: Oxford).

Rice, A. K. 1951. An examination of the boundaries of part-institutions, Human Relations 4:393-400.

Rice, A. K. 1952. The relative importance of sub-institutions as illustrated by departmental labor turnover, Human Relations 5:83-90.

Rice, A. K. 1953. An approach to problems of labor turnover: A case study, Brit. Management Rev. 2:19-47.

Rice, A. K., J. M. M. Hill, and E. L. Trist. 1950. The representation of labor turnover as a social process, Human Relations 3:349-72.

Ross, Arthur M. 1958. Do we have a new industrial feudalism? Am. Econ. Rev. 48:903-20

Scheff, Thomas J. 1961. Control over policy by attendants in a mental hospital. J. Health and Human Behavior 2:93-105.

Shils, Edward A., and Morris Janowitz. 1948. Cohesion and disintegration in the Wehrmacht in World War II, Public Opinion Quart. 12:280-315.

Silcock, H. 1954. The phenomenon of labor turnover, J. Roy. Stat. Soc. Ser. A, Part 4, 117:429-40.

Silcock, H. 1955. The recording and measurement of labor turnover, Personnel Management 37:71-78.

Slichter, Sumner. 1919. The Turnover of Factory Labor (New York: Appleton).

Stanton, Alfred H., and Morris S. Schwartz. 1954. The Mental Hospital (New York: Basic Books).

Taira, Koji. 1962. The characteristics of Japanese labor markets, Econ. Develop. Cult. Change 10:150-68.

Thomas, E. J. 1959. Role conceptions and organizational size, Am. Sociological Rev. 24:30-37.

Tollen, William B. 1960. Study of Staff Losses in Child Welfare and Family Service Agencies (Washington, D.C.: USGPO).

Trow, Donald B. 1960. Membership succession and team performance, Human Relations 13:259-69.

Trow, Donald E. 1961. Executive succession in small companies, Admin. Sci. Quart. 6:228-39.

Trow, Donald B. Teamwork under Turnover and Succession (Springfield: Nat. Tech. Inf. Serv., Tech. Rept. 2).

US bureau of the Budget. 1957. Standard Industrial Classification Manual.

US bureau of the Budget. 1963. Supplement to 1957 Edition Standard Industrial Classification Manual.

US Children's Bureau. 1960, 1963, 1964, 1965. Statistics on Public Institutions for Delinquent Children: 1958, 1962, 1963, 1964. US Dept. HEW Stat. Ser. 59, 70, 78, and 81.

US Children's Bureau. 1965. Child Welfare Statistics, 1964. US Dept. HEW Stat. Ser. 82.

US Public Health Service. 1964. Hospital Personnel. US Dept. HEW.

Woytinsky, W. S. 1942. Three Aspects of Labor Dynamics (Washington, D. C.: Social Science Research Council, Committee on Social Security).

Wrong, Dennis. 1961. Population and Society, 2nd ed. (New York: Random House).

Yett, Donald E. 1970. Causes and consequences of salary differentials in nursing, Inquiry 7:78-98.

Young, Andrew. 1965a. Models for planning recruitment and promotion of staff, Brit. J. Ind. Relations 3:301-10.

Young, Andrew. 1965b. The Remuneration of University Teachers, 1964-1965 (London: Assoc. Univ. Teachers).

Ziller, Robert C., Richard D. Behringer, and Jacqueline D. Goodchilds. 1962. Group creativity under conditions of success or failure and variations in group stability, J. Appl. Psychol. 46:43-49.

INITIAL DISTRIBUTION LIST

	No. Copies
1. Defense Documentation Center Cameron Station Alexandria, Virginia 22314	2
2. Defense Logistics Studies Information Exchange U. S. Army Logistics Management Center Fort Lee, Virginia 23801	1
3. Library, Code 0142 Naval Postgraduate School Monterey, California 93940	2
4. Department Chairman, Code 54 Department of Administrative Science Naval Postgraduate School Monterey, California 93940	1
5. Richard A. McGonigal, Cdr. Assoc. Code 54 (Mb) Department of Administrative Science Naval Postgraduate School Monterey, California 93940	1
6. Reuben T. Harris, Assoc. Code 54 (He) Department of Administrative Science Naval Postgraduate School Monterey, California 93940	1

- | | | |
|----|--|---|
| 7. | Director, HRM Division | 1 |
| | Bureau of Naval Pers (NMPC62) | |
| | Arlington Annex | |
| | Washington, D. C. 20370 | |
| 8. | Lt Joseph Almcny | 1 |
| | Pacific Fleet Propulsion Examining Board | |
| | CINCPACFLT Staff | |
| | Box 70 | |
| | Naval Station | |
| | San Diego, California 92136 | |
| 9. | Lt Jerrald Reece | 1 |
| | U.S.S. Saratoga (CV 60) | |
| | FPO New York 09501 | |